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# Missouri Medicine

Journal of the Missouri State Medical Association
January 1994

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- ☐ Histoplasmosis in Missouri
- ☐ Pediatric Kidney Transplantation
- ☐ Public Health in the Next Century
- ☐ Communication on the Internet
- ☐ Do We Really Need to Keep All of This Stuff?
- ☐ NEW! Ophthalmology Quiz

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Wilfred E. Wooldridge, MD

**MISSOURI STATE MEDICAL ASSOCIATION**
Box 1028, 113 Madison Street
Jefferson City, MO 65102
Phone: 314/636-5151
Fax: 314/636-8552
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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices. **Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.**

The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the cost os a copy of the annual August Directory is $15.00.

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Printed by the Ovid Bell Press, Inc., 1201-05 Bluff Street, Fulton, Missouri 65251.

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### January Cover

**This snowy Ozark stream is a watercolor by Terry L. Martin, M.F.A., assistant professor of art at William Woods College in Fulton, Missouri. He has been a regular contributor to the journal for the past ten years.**

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# New Beginnings, Again

J. Regan Thomas, MD

With the new year, it's the season to look to the future. It's a time to set goals, reflect on our opportunities, and perhaps assume new responsibilities. Over the past year I have urged physicians to use their talents and energies beyond the confines of their individual practices, and to interact with the greater community. Realizing that most of us appropriately see our patients and our practice activities as our primary calling, we must be selective in our opportunities to lead and serve in other stations. That selectivity does not diminish the potential impact on our participation or reduce the importance of that commitment.

**The need for active physician participation has never been greater, as one ponders the challenges certain to be encountered in the coming year.**

I generally try to be apolitical with most issues presented through this column, preferring to raise those issues and stimulate thoughtful discussion rather than espouse a specific point of view. My experience has been that with responsible intellectual people there is typically merit to several points of view. Often, when two extremes of opinions develop from deliberation of honest thoughtful individuals, the answer lies at some point in the proverbial middle ground. While certainly not a unique observation, it is more difficult to avoid arousing the extreme poles of opinion than it may seem to the casual observer. Of particular note is the curious tendency for certain readers to extrapolate extraneous personal concerns or opinions on one issue in their response to a separate issue of discussion. An example would include strong responses from both "pro-choice" and "anti-abortion" camps to the same editorial suggesting the importance of participation in organized medicine (i.e. AMA). Another was a response concluding that a column on violence in America had suggested the confiscation of hand guns when no statement about guns or "gun control" had been addressed at all. These are the occasional challenges to be confronted while continuing to raise questions and suggest discussion.

Through the coming year I hope that *Missouri Medicine* continues to provide the physicians of the state with a vehicle for expression and communication. Controversial topics will be printed if presented in a credible, well-documented fashion while also providing opportunity for balanced opposing views or data reflecting differing conclusions. You will see new features as well as continued attempts to enhance the aesthetics and readability of the publication to compliment the quality content of the Journal.

The well received Dermatology Quiz will be replaced by the Ophthalmology Quiz. This feature will be coordinated by Dr. John Hagan, III. I am thankful to coordinators Dr. Philip Anderson and Dr. Kent Walker and all of the contributing authors of the dermatology quizes. Dr. Hagan and sponsoring companies are appreciated for providing the new ophthalmology quizes.

While scientific contributions will continue to be encouraged in the publication, the "socio-economic" issues will no doubt play a key role in the coming year. The health care reform debate is only beginning and will predictably generate significant interaction. The need for active physician participation has never been greater, as one ponders the challenges certain to be encountered in the coming year. *Missouri Medicine* hopes to be an active participant as we start "new beginnings," again. ■

**Dear Editor,**

The Board of Healing Arts can, in one routine vote, destroy a professional reputation that was built, one patient at a time, over 30 years. How do I know? It happened to me. It can happen to you.

My reason for writing this is to help you, my colleagues, from suffering a similar fate to mine. Read my story. Judge for yourself my guilt and the law against which we are measured. But most importantly, protect yourself by seeking legal counsel at the first contact by the Board of Healing Arts or the Bureau of Narcotics and Dangerous Drugs (BNDD).

When Mike Nielson, a colleague at the Independence Regional Center, heard through one of those hushed conversations in the doctors' lounge that I had been investigated by the Board, he was incensed. He requested permission to use my case as the focal point for a discussion of the Board's activities at the September General Staff Meeting.

Physicians censured by the Board generally keep a low profile because the experience carries such a stigma of dishonesty and professional failure. I suspect most, if not all, suffer measurable depression as a result of the Board's action. Did I want the whole world to know of my encounter with the Board? Would this not increase my burden of self doubt?

But, why not? My immediate world already knew because the Board, as a part of my punishment, required that I notify all the hospitals and nursing facilities where I worked that I no longer had a narcotic license. My nurse had already started notifying many of my patients that they would have to find a new physician to meet their medication needs. To Mike's request, I said yes. Then I told Mike my story.

The story starts in August 1990 when the Board requested copies of an entire record mailed to them immediately. Their letter gave no hint as to the source of the complaint filed against me. To this day, I still do not know who filed the complaint that led to the investigation.

In early December 1990, I was presented with a subpoena to appear three weeks later for a hearing in Jefferson City. I was told I would not need an attorney because this was a hearing, not a trial, and the hearing would be conducted by two internists who merely wanted to understand my thinking in the case. This all sounded reasonable. My only preparation for the hearing was a review of the patient record the Board had requested.

When I walked into the hearing, my instincts told me that I should not have come without legal counsel. There sat two internists, one the medical director of the state licensing board, Dr. C. C. Reynolds, and a practicing internist from Jefferson City, Dr. Wheeler. At the end of the table was a staff person recording the entire proceeding.

After documentation of me as the accused and the medical record in evidence as my record, Dr. Reynolds skillfully picked me apart as he led me through a line of questions directed specifically toward the answers he needed to convince the Board of my guilt. Like a seasoned attorney, someone who had done this many times before, he asked only questions where he already knew the answers. My naivete and a thorough medical record sealed my fate.

Time passed. I heard nothing.

In June 1993, almost three years after the first contact by the Board, a certified letter arrived from the Attorney General of Missouri, informing me that the Board had found me guilty. I was given the option either of signing an agreement with the Board to fulfill a long list of punishments or of appearing before the Administrative Hearing Commission for a trial-type hearing. The advice offered in the letter, "By signing and returning the enclosed agreement, you may avoid some of the emotional and financial costs of a hearing."

But what about the case? Why was I found guilty of breaking the law? Why was my narcotic license removed for six months and my medical license placed on probation for three years?

The Board's judgement of my guilt was based on the following case. Look closely. You may recognize many of your experiences here.

The patient in question was a 41-year-old man who had documented diagnoses of cervical arthritis, TMJ arthritis, and mixed tension vascular headaches. He selected me because his parents had been patients in our office for years. He had been taking Tylenol #3 for 19 years and Percodan for 9 years. His pain seemed legitimate but his dose of analgesics seemed excessive. I assumed that as he developed tolerance his previous physicians had allowed him to increase his dose.

He understood that his chart would be marked in a way that would alert my partners and nurses never to allow him an increase in current doses. In his chart, I dictated the following problems: post MVA cervical arthritis, TMJ arthritis, mixed tension-vascular headaches, substance abuse. After telling the patient about my concerns, I refilled his prescriptions and, over the ensuing years, continued the same discussion and refills.

**Continued on page 8**

Continued from page 7

Never once did I think I was treating this patient for substance abuse. My treatment goal was control of his pain and control of his frequency of refills.

The Board concluded that I was treating this patient for substance abuse and, therefore, was in violation of the law which requires any physician treating substance abuse to have a special license. This is a law that I had not been exposed to in 30 years of private practice in general internal medicine.

As it turned out, My punishment was greater before I received the verdict than after the long delayed letter of "discipline." I spent those 3 years in self doubt, frustrated over the loss of what I considered an impeccable record.

Now that I have no narcotic license, others around me are punished much more than I am. My partners are punished as they try to accommodate my patients. Nurses at the hospital are punished when they call in the middle of the night seeking narcotics for a patient only to be told they will have to call one of my partners who is not on call. My patients are punished when they have to leave my care after long years of a trusting relationship.

So that's my story. Painful? You bet! My encounter with the Board has been the lowest point of my 30 year professional career.

My advice -- avoid being victimized by ignorance of the law and the System.

■ **Think of the Board of Healing Arts as a law enforcement agency.**

Seek legal counsel at the first contact by the Board, just as you would if confronted by a malpractice threat. The mission of the Board is to protect the public against unlawful physicians, particularly those who are deceived by exploitative patients and those who are unaware of the law.

■ **Remember that the Board is empowered by state law to be judge and jury for any investigation against you.**

Granted enormous power over your professional life, the Board can, if they choose, require surrender of your narcotic license, revoke your medical license or refer your case to the courts for felony prosecution. Do not take them lightly.

■ **Learn about the laws governing your professional life.**

Read each and every issue of the *Healing Arts News*, the quarterly newsletter of the Board. File every issue for reference. You may need it later. This newsletter is the only meaningful effort at education you will receive from the Board. The Board could use their investigators to educate you at the first sign of a problem, but they choose punishment rather than education as their highest priority.

■ **Recognize that the vast majority of physicians punished by the Board are caring and trusting physicians.**

These physicians are classified as "deceived physicians who become victims of the deceptive plots of drug addicts." When investigations are initiated by the BNDD, there obviously is an arbitrary threshold number of controlled substance units per patient per time below which physicians are safe but above which any one of us becomes a "deceived physician" and our patient is judged a "drug addict."

Remember that being investigated equals being punished. Talk to your colleagues about their experiences with the Board and the BNDD.

Talk to Dick Troeh, an internist in Independence, about having to talk to an investigator during office hours for one hour while his patients waited. When asked to come back after patient hours, his investigator said, "Talk to me now or come to Jeff City later." Dick considered that punishment.

Talk to Bill Boulware, an internist in Chillicothe, about receiving a request for copies of 10 medical records on December 24th. Because he lets his office staff off for the week of Christmas, Bill had to spend his Christmas holidays copying charts for the Board. Bill considered that punishment.

Talk to your colleagues in Trenton about their experience with the BNDD when virtually every physician in town was investigated and punished by the Board, resulting in several physicians leaving rural practice.

And finally, consider the following three goals as a call to action by physicians in Missouri. These came out of a lively discussion by about 200 concerned physicians attending the Independence Regional Health Center General Staff Meeting in September 1993.

**Physicians in Missouri should:**

1. **Educate each other about the laws governing our professional lives, the Board of Healing Arts and the BNDD.**

2. **Seek legislative relief of unfair state laws that allow unregulated bureaucratic intrusion into our professional lives. As health care reform unfolds at the federal and state level, the time could not be better.**

3. **Establish an ongoing relationship with a knowledgeable legal counsel through a retainer fee, paid for through a voluntary addition to our MSMA or County Medical Society dues. Those who pay would have access to immediate legal consultation.**

Goals #1 and #3 certainly are attainable short-term goals. **LET'S DO IT!**
**J. H. Morris, MD,** ***Independence, Missouri***

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**Dear Editor,**

Each Physician who practices medicine whether in Missouri or any other state, should be fully aware of all statute, rules and regulations governing the practice of medicine.

Dr. Morris voluntarily entered into an agreement with the Board on July 16, 1993 after being fully advised of his rights, including the right to a fair and impartial hearing before the Administrative Hearing Commission concerning the charges pending. Dr. Morris voluntarily waived each and every one of his rights and agreed to abide by the terms of the agreement. Dr. Morris, in the agreement, admitted that between 1987 and 1990, he prescribed controlled substances, in excessive amounts and for extended periods of time, to one patient, even though he knew the patient was addicted to the substances concerned. Dr. Morris' conduct constituted the prescribing of controlled substances for other than medically accepted therapeutic purposes and violations of the drug laws or rules and regulations of the State of Missouri and/or the Federal Government.
**Jean H. Mathews, MPA, President**
**State Board of Registration for the Healing Arts**

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**To the Editor:**

The Missouri CLIA inspection team reports mostly good laboratory performance in this, the first survey cycle. Conscientiousness and cooperation have been the characteristics most commonly encountered during the on-site inspections.

There are a few deficiencies that seem to be more commonly found, and we want to pass this information on to you. We are finding that too few controls are performed with the chemistry and hematology procedures. Remember, the CLIA regulations require that you:

1. **Follow the manufacturer's instructions.**
2. **Test two known control samples each day the test is performed in both chemistry (cholesterol, creatinine, glucose, etc.) and hematology (CBCS, hemoglobin, hematocrit, white counts, platelet counts, etc.) and record the results.**
3. **Calibrate the instruments at least every six months using the manufacturer's calibration instructions, and record this information.**

Additional problems are being discovered in virtually every office laboratory that performs bacteriological cultures. These cultures are routinely of urine using a prepared kit, or of a throat swab for beta-Streptococcus. **NOTE:** The throat swab to presumptively identify beta-Strep is a moderately complex text, while the urine culture is high complexity if identification of any kind is attempted. Only colony counts are moderately complex.

If urine culture kits are used, they must be used strictly in accordance with the manufacturer's instructions. If no provisions for mixed cultures or specification is made in the printed instructions, none will be allowed. No deviation from the manufacturer's instructions is permitted.

If antibiotic susceptibility tests are performed, these must be tested weekly with control organisms that give predictable results. Often the manufacturer provides instructions for susceptibility testing and mentions no control procedures of any kind.

For throat cultures, a written procedure must be available. This procedure must describe each step in the procedure as it is performed in the laboratory, and it must include pertinent literature references. **REMEMBER:** It is required that the bacitracin disc be tested with a known beta-Strep control organism.

ALSO CLIA requires that you must have quality control information from the manufacturer of the media present in the laboratory. This information must stipulate that the media has been controlled in conformance with the standards published by the National Committee for Clinical Laboratory Standards (NCCLS).

If gram stains are performed, they also must be controlled weekly with known gram-negative and gram-positive organisms.

**AND DON'T FORGET:** In 1994, proficiency testing is required. If you are performing any of the above procedures, you must be enrolled in an approved proficiency testing program by January 1, 1994.

Questions? Call either of the surveyors, Donna Tarka or Margaret Young at (314)751-6318.
**Bureau of Hospital Licensing and Certification**
**Missouri Department of Health**

# Read that waiver carefully

Melvin C. Kasten, MD, MSMA President

**You should take care that you do not sign away your legal rights to redress when you apply for a staff appointment or reappointment.**

Your vita isn't enough to earn staff privileges at your nearby hospital any more. Today, a medical peer review committee will want to explore the information contained in your National Practitioners Data Bank file before awarding you an appointment at their institution.

Any dirt here? Well let's just open up the old file and take a look.

Regardless of our feelings about the NPDB, the information is there to tell our peers if we've been sanctioned by medical societies, state boards, previous employers or others with whom we've worked in the past. And, since it's available, a hospital's legal protection against liability for a physician's actions could depend to a large degree on whether or not they've checked that doctor's NPDB file before granting staff privileges. It's supposed to keep inept docs from migrating scott free to "parts unknown" when things get too hot in their old location.

During peer reviews, we're told this background check is "just routine." Then we're asked to sign a Waiver of Confidentially before our NPDB file is opened. If we think to question this form, we're probably told that the waiver is simply a formality to protect the hospital and medical staff from liability in the event that sensitive information from a file is handled in a less then confidential manner.

At first glance the form may look like just one more piece of paper for a doctor to sign before he or she can get on with the business of healing patients. But, you should be alert to the way some waivers are worded.

You should take care that you do not sign away your legal rights to redress when you apply for a staff appointment or reappointment. The MSMA, working closely with our HMSS, has prepared a model waiver that we believe protects a physician's rights while also addressing a hospital's liability needs. You'll want to compare this model waiver against the one you're asked to sign.

The MSMA staff will mail copies of this model waiver soon, along with another model waiver that was designed for use for those instances when a managed care group or other "non-authorized" entities ask a physician to "self-query" his or her NPDB file. This packet of information will be sent to the presidents of hospital medical staff associations and heads of credentials committees. MSMA members with a question about a waiver should contact the MSMA office in Jefferson City. At this time, the MSMA staff has handled about 75 inquiries.

Before you sign a waiver of confidentially that protects others from the harm caused by an inappropriate use of your sensitive information, read it carefully to make sure your rights are preserved, too.■

# New Year's Resolution # 1

Elizabeth Huffaker, MSMAA President

Every year with all good intention, I make my New Year's resolutions. I enter into these commitments with myself with all of the sincerity that I will make these self improvements. After all, they are for my own good! But these resolutions are made in secret to myself, so they can easily be broken. This year I would like to make my #1 resolution public and invite others to add this resolution to their list for this coming year. It is to become politically savvy. It is so easy for us to sit back and let our physician spouse carry the "worry" load for the health care reforms that are coming to the profession. I'm asking that we, as partners to physicians, help shoulder the load by helping in the area of politics. (Physicians, if your spouse is not a member of MSMAA, please give the gift of membership and allow him or her the opportunity to become involved!) The 1994 Legislative Session is beginning and we know for a fact that the political environment for medicine is changing radically. We know also from experience that the only certainty in life is change and that the government is doing its best to change the way medicine has been practiced. We also know without a doubt that politicians are the last entity in which we should trust to deal with health care reform with compassion and fairness for all. These impending changes will not only effect patients, but will encompass all physicians, and in turn, their families.

Spouses can become valuable spokespersons for medicine. To see the efficacy of team work, look at how Hillary and President Clinton work together. We live with physicians. Many of us work in our spouses' offices. Who better to see personally how the various legislative changes effect the practice of medicine? It is time that we stand up and be heard in a responsible manner. It is time to become political activists. By this I mean, it is time for us to become involved. If we wait until tomorrow or for someone else to do it, unfortunately it may be too late.

Take advantage of every opportunity to meet and become better acquainted with your legislators. (I assume everyone knows who their legislators are!) Opportunities arise through society meetings, business associations, charitable organizations, church, or local and state political functions. Get to know them on a personal basis for the relationship that you nurture with your elected official can have a positive effect on the outcome of local, state, and federal legislation. The most important thing is to believe that your participation can and will make a difference. Get involved and motivate other physicians and their families to become visible and "achieve a higher profile as community leaders and opinion makers."

Learn the system. Take the time and effort to become familiar with the legislative process, health committees, and subcommittees, your legislators, and their staffs. You may find that this is not only personally satisfying and challenging, but also fun.

To be listened to with any credibility you must be informed. When you communicate with a legislator, you want to be sure your information is accurate, reliable and factual. Stay abreast of the health issues facing Congress or being brought before federal and regulatory agencies. When spouses help with this function, physicians can have more time to do what they have been trained to do...practice medicine.

Continued on page 15

## MSMAA
## Day at the Legislature

**February 7 & 8, 1993**
**Capitol Plaza Hotel & Capitol Building**

**Please consider joining Alliance members at a cocktail/dinner meeting Feb. 7 to learn about current issues of importance to MSMA during this year's session. The next morning you will have the opportunity to meet and discuss legislation with your state representatives and senators. For more information contact Nona Nan Chapman, 314/335-7154.**

# What A Mess!

Danielle Halsel

After several years of "hammering" by politicians, consumer groups, employers and third party payers, the only major change in the delivery of health care is a continued increase in the cost of care.

The groups mentioned above have pointed the finger of accusation at physicians for so long, the public now accepts the "common wisdom" that physicians are the major culprit in the increase; although hospitals are now being targeted with increasing frequency.

If any other industry in America was growing at the rate of the healthcare industry, it would be heralded as a major boon to the overall economy. There is no outcry, public or political, over the growth of the auto, construction, or defense industries. When construction rises, or more cars are sold, it is considered positive economic news. "Healthcare's major problem is its ties to payments to government programs, [Medicare, Medicaid, etc.] and the government's attempts to provide promised care to constituents while restricting payments.

The illogic of this situation is maddening.

✦ Clinton proposes to spend billions to create part time or minimum wage jobs, while doing his best to restrict the growth of the healthcare industry; the only growth industry left in America...an industry that could be in a position to hire additional thousands of workers; if not crippled by regulations and global caps.

✦ HHS and HCFA continue to grow in size and power as regulation of this industry reaches ridiculous proportions.

✦ No other industry would permit the level of regulation experienced by healthcare without severe repercussions in Washington. The IRS must be envious of what HCFA has achieved.

✦ Clinton and Congress are doing all they can to restrict the growth of healthcare, while deferring the downsizing of defense spending. Why is there such a difference in their approach? If downsizing defense spending is a burden to the economy, why is that thinking not applied to healthcare? The government is a major purchaser of both. Why is defense spending appropriate and healthcare spending inappropriate? Maybe Congress should put a HCFA clone agency in control of defense spending; $500 hammers should call for, at least, the same inspection and regulation as $50 office visits.

✦ The government is encouraging providers to integrate as a way to control costs, then threatening to prosecute those who do, under inuring statutes.

✦ The various segments of major industries in America work together to maintain the integrity and profitability of their industry. Healthcare segments are at war with each other; so, divided we fall.

Obviously, like any other industry, there are problems that need to be addressed. The cost and availability of healthcare are major issues that need resolution. Regretfully, public and political pressure is causing panic in the industry and the result may be a rush to change without thought for the resulting consequences.

✧ Will physicians be happy, long term, giving up their practices?

✧ Will hospitals be able to profitably manage integrated delivery systems?

✧ Will California style delivery models provide the best delivery systems for non-metropolitan communities?

**Continued on page 15**

# Ophthalmology Quiz #1

John C. Hagan, III, MD

This 65-year-old farmer was using a large chisel and sledge hammer to split firewood. Upon striking the chisel he felt a slight stinging sensation on his right eye associated with some tearing, mild blurring of vision and a foreign body sensation. He has not had his eyes examined in over a decade. He was not wearing safety glasses while splitting the firewood.

When examined about two hours after the incident the visual acuity uncorrected at distance was 20/30 right eye and 20/25 left eye. The external examination of the right eye is shown in Figure 1.

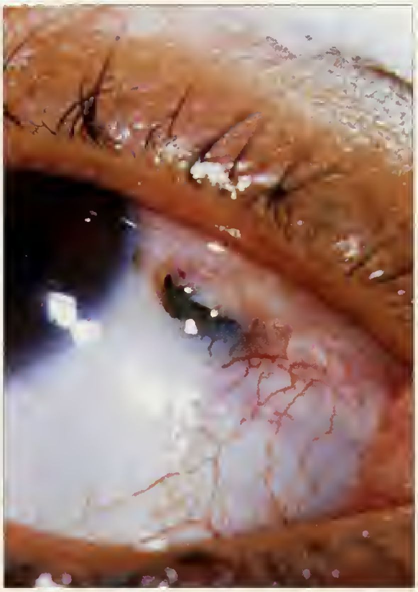

Figure 1

**1. The best clinical diagnosis for this patient's problem is:**

a. Ocular melanoma with scleral extension
b. Extraocular conjunctival foreign body
c. Scleral perforation with uveal prolapse
d. Pyogenic granuloma of conjunctiva

**2. The best treatment for this patient would be:**

a. Instill ocular antibiotic drops, pressure patch eye and refer to an Ophthalmologist.
b. Instill ocular antibiotic drops, apply eye shield and refer to an Ophthalmologist.
c. Apply ocular antibiotic drops, tetracaine and remove conjunctival foreign body with sterile Q-tip.
d. Begin metastatic work-up to rule out spread of ocular melanoma.

**(See answers on next page.)**

# OPHTHALMOLOGY QUIZ ANSWER

**(Ophthalmology Questions are on previous page.)**

**Answers:**

**1) c. Scleral perforation with uveal prolapse**
**2) b. Instill ocular antibiotic drops, apply eye shield and refer to an Ophthalmologist.**

This case represents a typical history and physical findings for perforation of the eyeball by a projectile metallic foreign body. The orbital roentgenogram in this case is shown in Fig. 2 and shows a retained metallic intra-ocular foreign body. The entrance point into the globe is the area of the uveal prolapse shown in Fig. 1. The history of the circumstances of the injury is very important. Possible perforated globe and/or retained foreign body should be suspected in all cases of "metal-on-metal" contact at the time of the injury. Identification and treatment of a ruptured or perforated globe is the second most important ocular emergency. The most important and pressing is treatment of a chemical burn of the eye especially an alkali burn. Remember that vision may remain excellent despite a full thickness globe laceration. A ruptured globe should be suspected if any of the following are present: 1. History of severe blunt trauma, projectile injury, contact with a sharp object, or trauma resulting from hammering metal-on-metal; 2. subconjunctival hemorrhage; 3. conjunctival laceration; 4. uveal prolapse, indicated by dark tissue either iris or ciliary body on the surface of the globe (it is important not to mistake uveal prolapse for an external foreign body and attempt to remove it. This will have disastrous consequences); 5. irregular or pear-shaped pupil. The peak of the pupil points towards the perforation (Fig. 3); 6. hyphema or blood in the anterior chamber of the eye; 7. lens opacity or traumatic cataract which can form in less than an hour.

If a ruptured globe is suspected, stop the emergency examination immediately to avoid excessive manipulation of the eye. If the patient squeezes due to the pain of the examination the intraocular contents can be further extruded. Do not patch the eye because the patch pressure may also cause extrusion. Instead, place a protective shield over the eye to prevent pressure. These shields can be made expressly for this purpose such as a Fox shield (Fig. 4/left) or they can be fashioned out of cups (Fig. 4/right), cardboard, or firm plastic. Give tetanus toxoid, instill antibiotic drops (not ointment) such as Garamycin, Tobrex, Ciloxan or Ocuflox and refer the patient to an Ophthalmologist.

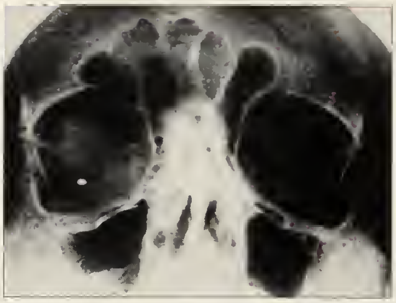

Figure 2

The orbital roentgenogram shows a retained metallic intraocular foreign body.

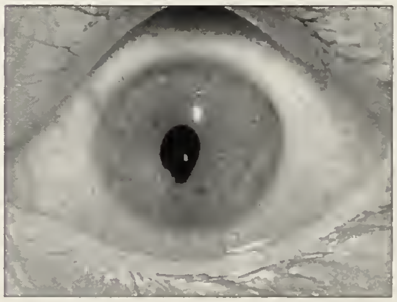

Figure 3

A pear shaped pupil often indicates a full thickness corneal perforation. The peaked area "points" to the lacerated area.

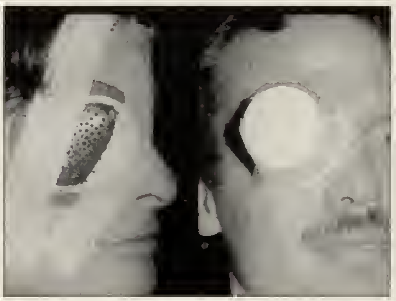

Figure 4

(left) A metal Fox eye shield prevents pressure on the eye. Eye pads should not be used underneath the shield. (right) A paper cup can also be used to shield the eye during transfer to the Ophthalmologist.

*Reference*

Shingleton BJ: *Eye Trauma and emergencies: A slide-script program.* American Academy of Ophthalmology; San Francisco 1985.

Dr. Hagan is the Director of the Midwest Eye Institute of Kansas City, North Kansas City, Missouri. Financial support for this feature is provided by **Alcon Surgical, IOPTEX, Inc., North Kansas City Hospital, Missouri Ophthalmological Society, Inc., CHIRON, Inc., and Merck & Co. Inc.**

**Alliance Message, Continued from page 11**

It is imperative that you attend meetings, hearings, briefings, and if an opportunities arise, take advantage of training sessions. The MSMA offered a training session in November on how to run or to help a political campaign. Take advantage of these informative opportunities. The AMA and MSMA put a lot of time and effort into these seminars, which are excellent, especially if you are feeling a little unsure of yourself. The seminars are designed to make your dealings with legislators more meaningful and raise your comfort level.

To participate fully in the legislative process you should be prepared to participate both financially and personally in the election campaign of your political representatives. Offer your services to campaign in a volunteer capacity, and very importantly, contribute financially. It takes a lot of money to finance a campaign. The medical community is notorious for not wanting to part with money, and I understand this. (We have two children in college and pay tuition to three schools.) But it is time that we loosen the purse strings and contribute before the government legislates us to death and we no longer have anything to contribute. Campaign contributions are not soon forgotten, although a monetary contribution does not excuse you from personal involvement at the grassroots level. Offer to help with mailings, passing out literature, or making phone calls. Invite a legislator and his or her spouse to a small social gathering with other physicians and their families or friends and neighbors. Perhaps you could host such an event in your home. Attend political functions and fundraisers. This is a wonderful way to meet legislators that you might not have an opportunity to meet elsewhere. Don't always speak with your legislator about something you want. It's nice not to tire them by discussing health legislation every time you're together. Remember, he or she is as human as you or I so try sometimes to talk of things that are of interest to that person. Save your arguments and views on health issues for when the situation is appropriate for presenting them.

We as medical spouses can make our voices heard. We can be true helpmates to our physician spouses, for we too are concerned about providing the best possible medical care to the American public. We are concerned about the future of medicine, for it is our future and our children's future. With continued government involvement in the health care field, it has become mandatory that physicians and their spouses no longer remain passive. We can no longer sit back and say, "we don't have time." Seize the day and make your resolution to become savvy to what is happening politically in medicine now. Believe in your ability to make a difference. Medicine as we know it is rapidly changing before our eyes. You can allow others to effect change or you can go out and effect change yourself. Personally, I believe more in myself than I believe in the government.■

**Practice Management, Continued from page 12**

- ✧ Will HCFA allow all this integration over time?
- ✧ Will the public accept large, impersonal delivery systems?

If either the Clinton plan or Stark plan is implemented, approximately 37 million people with pent up demand are going to be granted some level of paid access to healthcare. This additional pressure on any healthcare delivery system would be difficult to handle. It will be increasingly so, if the rush to large practices continues; particularly if hospitals are the major buyers and developers of these large clinics. Logic would dictate that one of the major reasons physicians are willing to sell their practices and become employees is to reduce their stress levels. That equates, in part, a desire for either less hours of patient activity or the same hours, seeing fewer patients. Either, produces a lessening of physician availability; and when tied to the addition of 37 million more patients, produces a specter of rationing not yet seriously considered.

If this situation occurs, hospitals will be charged with tremendous responsibility to respond to this imbalance of demand and capacity to perform and find solutions. It will be particularly challenging in situations where one hospital serves the entire community.

With only confusing, informal, threatening "red herrings" from the Clinton Task Force and HCFA, as a substitute for clear regulations, it is almost impossible to plan with any assurance that long rage commitments will not violate future political reforms.

Regretfully, the red herrings may be preferable to the actual regulations. **What a mess!** ■

*If you have questions for Danielle Halsel, write to Practice Management, c/o* ***Missouri Medicine****,*
*P.O. Box 1028, Jefferson City, MO 65102 or call her at (913)541-0050.*

# Business Record Retention: Do We Really Need to Keep All of This Stuff?

Sidney A. Dulle, CPA

Probably not. It's a pretty safe bet that at least half of your old business records can be thrown away. The question is...which half?

- **95 percent** of the references to filed material are to items less than three years old.
- **85 percent** of a company's records will never be referred to for any reason.
- **Two out of every five** papers filed are duplicates of papers already in the files.[1]

Considering the cost of maintaining, storing and retrieving from an ever expanding mountain of paper, it seems only prudent to minimize what needs to be retained. File cabinets cost money and they take space. The sheer cost of maintaining your files and records can be staggering when you put a pencil to it. And have you ever tried to find that one form or file from among a pile of cardboard boxes loaded with "old stuff"?

The Internal Revenue Service requires substantiation by adequate records. Unfortunately, the IRS does not explain specifically which books and records it requires.[2] Understand, however, the burden of proof is with you as a taxpayer. Absent adequate records, the Internal Revenue Service can deny any deduction. Absent any records, the Service has developed several legally enforceable methodologies to reconstruct a taxpayers income. I don't think you'd like the results.

While the statute of limitations for audit is three years, gross negligence resulting in an understatement of gross income of 25 percent or more can extend the period to six years. If fraud is shown, there is not time limitation. The safest approach on tax returns...keep them permanently.

Various branches of government have their own rules for record retention. The Guide to Record Retention Requirements in the Code of Federal Regulations is a good reference resource. Beware, even in this Guide and its Supplements, they "...do not have the effect of law, regulation, or ruling."[4] In short, it is only advice, not a guarantee of protection.

The accompanying Records Retention Schedule[3] (see next page) for business is a good starting point for determining "which half." Your needs may vary slightly. Legal counsel and advice of your CPA would be wise before implementing a plan of retention for your specific needs. ■

*References*
1. *CPA Client Bulletin*, December, 1988, "Record-Retention Scheduling: Trying to Identify the One Paper in a Hundred that will be Needed" American Institute of Certified Public Accountants
2. Ibid.
3. *The Practicing CPA* (ISSN 0885-6931), October 1987, Vol. II, No. 10, "Record Retention - How Long Must We Keep Them?" American Institute of Certified Public Accountants
4. Federal Register, Monday, May 3, 1993, Part IX, Supplement to the Guide to Record Retention Requirements in the CFR - Revised as of January 1, 1993, Vol. 58, No. 83, p:26450

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**Sidney A. Dulle, CPA,** is President of Dulle & Associates, P.C., Certified Public Accountants at Jefferson City, Missouri.

## RECORDS RETENTION SCHEDULE

| | |
|---|---|
| Accident Reports/Claims (settled cases) | 7 years |
| Accounts Payable Ledgers and Schedules | 7 years |
| Accounts Receivable Ledgers and Schedules | 7 years |
| Audit Reports Permanently Bank Reconciliations | 2 years |
| Bank Statements | 3 years |
| Capital Stock and Bond Records: ledgers, transfer registers, stubs showing issues, record of interest coupons, options, etc. | Permanently |
| Cash books | Permanently |
| Charts of Accounts | Permanently |
| Checks (canceled-see exception below) | 7 years |
| Checks (canceled for important payments, special contracts, etc. Checks should be filed with papers pertaining to the underlying transaction) | Permanently |
| Contracts, Mortgages, Notes, and Leases | |
| (expired) | 7 years |
| (still in effect) | Permanently |
| Correspondence (general) | 2 years |
| Correspondence (legal and important matters only) | Permanently |
| Correspondence (routine) with Customers and/or Vendors | 2 years |
| Deeds, Mortgages, and Bills of Sale | Permanently |
| Depreciation Schedules | Permanently |
| Duplicate Deposit Slips | 2 years |
| Employment Applications | 3 years |
| Expense Analyses/Expense Distribution Schedules | Permanently |
| Financial Statements (year-end, other optional) | Permanently |
| Garnishments | 7 years |
| General/Private Ledgers, Year-end Trial Balance | Permanently |
| Insurance Policies (expired) | 3 years |
| Insurance Records, Current Accident Reports, Claims, Policies, etc. | Permanently |
| Internal Audit Reports (longer retention periods may be desirable) | 3 years |
| Inventories of Products, Materials, and Supplies | 7 years |
| Invoices (to customers, from vendors) | Permanently |
| Journals | Permanently |
| Magnetic Tapes and Tab Card | 1 year |
| Minute Books of Directors, Stockholders, Bylaws and Charter | Permanently |
| Notes Receivable Ledgers and Schedules | 7 years |
| Option Records (expired) | 7 years |
| Patents and Related Papers | Permanently |
| Payroll Records and Summaries | 7 years |
| Personnel Files (terminated) | 7 years |
| Petty Cash Vouchers | 3 years |
| Physical Inventory Tags | 3 years |
| Plant Cost Ledgers | 7 years |
| Property Appraisals by Outside Appraisers | Permanently |
| Property Records including costs, Depreciation Reserves, year-end Trial Balances, Depreciation Schedules, Blueprints and Plans | Permanently |
| Purchase Orders (expect purchasing department copy) | 1 year |
| Purchase Orders (purchasing department copy) | 7 years |
| Receiving Sheets | 1 year |
| Retirement and Pension Records | Permanently |
| Requisitions | 1 year |
| Sales Commission Reports | 3 years |
| Sales Records | 7 years |
| Scrap and Salvage Records (inventories sales, etc.) | 7 years |
| Stenographers' Notes | 1 year |
| Stock and Bond Certificates (canceled) | 7 years |
| Stockroom Withdrawal Forms | 1 year |
| Subsidiary Ledgers | 7 years |
| Tax Returns and Worksheets, Revenue Agents Reports, and other Documents relating to determination of Income Tax Liability | Permanently |
| Time Books/Cards | 7 years |
| Trademark Registration and Copyrights | Permanently |
| Training Manuals | Permanently |
| Union Agreements | Permanently |
| Voucher Register and Schedule | 7 years |
| Vouchers for Payments to Vendors, Employees, etc. (includes allowances and reimbursement of employees, officers, etc., for travel and entertainment expenses) | 7 years |
| Withholding Tax Statements | 7 years |

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# PUBLIC HEALTH IN THE NEXT CENTURY

Coleen Kivlahan, MD, MSPH, Director, Missouri Department of Health

**The over-reliance of our health care system on treatment of disease rather than prevention of disease has brought it to the point of near financial collapse. Although improvements in longevity and in key health status indicators have occurred, to some extent from advances in medical care, many of the gains in healthy living have come from basic population-based interventions known as public health. This article describes the role and function of public health, describes the public health system in Missouri, and recommends the reinventing of public health for the next century.**

## INTRODUCTION

The heavy reliance of our medical care system on disease treatment, the introduction of costly new technology with inadequate knowledge about its effectiveness, and the exclusion of a significant number of Americans from basic health care have led our health system to the point of financial collapse.

In the United States, less than one percent of our national health expenditures are spent on public health and only three percent on prevention activities.[1] Yet most of the gains in longevity and in many health status indicators are due to public health interventions including food, sewage, water and air control, communicable disease control, immunizations, work place safety, and public education regarding the prevention of chronic diseases and injuries. Even during the recent state and national health reform debate, very little has been heard about the improved health status of our population overall, while we concentrate heavily on insurance reform, financing reform, malpractice coverage and administration of hospitals. These reforms are essential, and each of us desires a high quality, well organized system for illness care at a reasonable cost. Yet in order to improve our overall health status, our best resources should be spent on keeping people healthy. If the public health system is enhanced and is placed at the foundation of all health reform plans, vital support for a more effective medical care delivery system can be obtained.

## WHAT IS PUBLIC HEALTH?

Public health is both a philosophy and a system of services. C.E.A. Winslow, a pioneer in public health described it as:

> "The science and art of preventing disease, prolonging life, and promoting physical and mental health and efficiency through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual and the principles of personal hygiene, the organization of medical and nursing services for the early diagnosis and treatment of disease, and the development of social machinery which will ensure to every individual in the community a standard of living adequate for the maintenance of health."[2]

Public health is a philosophy. It is a philosophy that involves caring about populations--that is, all of the people who live in a community. Public health is a science that is concerned about individual health only as it relates to the health of the community. The Institute of Medicine in 1988 stated that "Public health is what we, as a society, do collectively to assure the conditions in which people can be healthy."[3] Determinants of a healthy population include demography, strong economic security, a commitment to education, environmental safety, and a safe work place. Following these in importance are a nation's medical care system and the extent to which there is equity in access.

Major gains in the health status of Americans have come from efforts that affect entire populations. Improving sanitation, water purity, nutrition, infectious disease control, and immunization are critical factors in assuring the community's health status. These approaches have proven much more effective in improving the health status of our population than its medical care system. When food and water become contaminated, when there are shortfalls in adequate immunization rates, when sexually transmitted diseases rage out of control, when there is an epidemic of tobacco-related

Continued on page 20

Continued from page 19

diseases, the cost to the medical care system is significant.

Public health is a system of services. The essential public health functions have been described as assessment--to measure trends in health status indicators of importance within a community; policy development--to develop and promote interventions to address specific concerns, with a high priority on evaluation; assurance--to assure that basic health services are delivered within a community. In order to accomplish this in Missouri, we have a system of 114 independent local health agencies with contractual relationships for services to the State Department of Health. Approximately 1,000 employees at the local county level are involved in public health activities. Their daily efforts include immunizations, administering the WIC (Supplemental Food for Women, Infants, and Children) program, restaurant inspection, child day care center inspection, communicable disease control and treatment, health education, health screenings, school health programs, community health nursing, home-based care services, and a significant volume of personal health services. Local health departments vary in their scope of services, area of coverage and in their integration with the rest of the health care community. In 1991, state and federal funds comprised 35% of local health departments' budgets, with fees and local taxes supporting the remainder.

Public health services at the community level touch each of our lives. Our local public health unit manages our birth and death certificates, assures the safety of private water supplies, protects us from toxic exposures, monitors our community for disease outbreaks, conducts community-wide health education, and for an increasing number of us, assures basic health care to our families and communities.

At the state level, the Department of Health employs 1,544 workers, with an annual budget of $220 million. The Missouri Department of Health conducts a broad range of functions such as maintaining information systems to track health status and outcomes of health interventions, providing a system for environmental health activities, responding to health hazards and crises such as the recent statewide flood, enforcing state and federal laws, and providing additional resources for personal health services in underserved areas.

When public health is working in Missouri, it is invisible! The goal of public health is to prevent catastrophes from happening, both in our personal lives as well as in our communities. The citizens of Missouri trust that we are caring for the health of the public overall. However, the reality is that both within the local health departments and at the state level, personal care services have overwhelmed our commitment to more basic public health functions. The federal government has designated 64 Missouri counties or parts of counties as health provider shortage areas. Because of the lack of health providers in these counties, the local health agencies have assumed a heavy load of direct clinical services to fill in the gap for basic medical care access. Because of health reform, there is an immediate need to evaluate the roles and functions of local health agencies, as well as the State Department of Health, as we enter the next century.

## WHAT IS THE ROLE OF PUBLIC HEALTH IN THE NEXT CENTURY?

It is time to reinvent public health to work efficiently and in concert with the medical care system to address community problems. In the future, the reformed medical care system will assume responsibility for the delivery of individual health services for the entire population. Reforms in the nation's medical care system must be paralleled by reforms in its public health system.[4] That is: Health Reform = Medical Care Reform + Public Health Reform.

There will be significant challenges for the medical care system if a strengthened public health system is not an integral part of health reform. First, unforeseen events such as HIV infection, natural disasters, increased urban violence and increased tobacco, drug and alcohol use will cost the medical care system, and therefore all of us, a great deal. In a reformed system, these costs are lowered directly as the health status of the population is improved. Second, many public agencies, hospitals, community, rural and migrant health centers and local health units are delivering basic health care to the otherwise underserved populations in Missouri. The integration and collaboration of these entities with the private medical care system is essential. A transition period for clarifying and transferring responsibilities must be carefully planned. Local public health units with strong personnel and facilities may continue to deliver primary care in partnership with the private health care system.

The year 2000 is upon us. In 1990, the federal government undertook an ambitious project which set health goals for the nation. The Healthy People 2000 document has led states and communities to develop local goals with measurable outcomes. The 330 "Healthy People 2000" objectives can be simplified into three major areas of concern:

1. To increase the span of healthy life by preventing premature death, disability, and disease.
2. To improve the health of those high-risk population groups who suffer most from preventable health problems.
3. To achieve access to preventive health services for all.[5]

Assuming that under a reformed health system the public health system will remove itself from the direct delivery of personal care services, what are the new core public health core functions? As described in the National Health Security Act, the health reform proposal of President Clinton, the following core Public Health functions have been identified[6]:

1) Data collection, activities related to population health measurement and outcomes monitoring, including the regular collection and analysis of public health data, vital statistics, and personal health services data analysis for planning and needs assessment purposes, including data collected from health plans through the information system under Title V of this Act.

2) Activities to protect the environment and to assure the safety of housing, workplaces, food and water, including the following activities:

- A) Monitoring the overall public health quality and safety of communities.
- B) Assessing exposure to high lead levels and water contamination.
- C) Monitoring sewage and solid waste disposal, radiation exposure, radon exposure, and noise levels.
- D) Abatement of lead-related hazards.
- E) Assuring recreation and worker safety.
- F) Enforcing public health safety and sanitary codes.
- G) Other activities relating to promoting the public health of communities.

3) Investigation and control of adverse health conditions, including improvements in emergency treatment preparedness, cooperative activities to reduce violence levels in communities, activities to control the outbreak of disease, exposure related conditions and other threats to the health status of individuals.

4) Public information and education programs to reduce risks to health such as use of tobacco, alcohol and other drugs, sexual activities that increase the risk to HIV transmission and sexually transmitted diseases, poor diet, physical inactivity, and low childhood immunization levels.

5) Accountability and quality assurance activities, including monitoring the quality of personal health services furnished by health plans and providers of medical and health services in a manner consistent with the overall quality of care monitoring activities undertaken under Title V, and monitoring communities' overall access to health services.

6) Provision of public health laboratory services to complement private clinical laboratory services and screen for diseases and conditions such as metabolic diseases in newborns, provide toxicology assessments of blood lead levels and other environmental toxins, diagnose sexually transmitted diseases, tuberculosis and other diseases requiring partner notification, test for infectious and food-borne diseases, and monitor the safety of water and food supplies.

7) Training and education to assure provision of care by all health professionals, with special emphasis placed on the training of public health professions including epidemiologists, biostatisticians, health educators, public health administrators, sanitarians and laboratory technicians.

8) Leadership, policy development and administration activities, including needs assessment, the setting of public health standards, the development of community public health policies, and the development of community public health coalition.

In Missouri, we have also developed Year 2000 health objectives[7,8] that highlight several ongoing challenges to improving the health status of our citizens (see Table 1). These include the black infant mortality rate, homicide, syphilis, child poverty, low birth weight, inadequate prenatal care rates, cancer, and heart disease. These rates are far from our goals and need significant attention. Specifically, the overall Missouri infant mortality rate in 1992 of 8.5 was lower than the 1990 goal of 9.2 nationwide but falls short of the year 2,000 goal of 7.0. This rate is complicated by the fact that the white infant mortality rate in 1992 was 6.9, yet the black infant mortality rate was 16.0. The black infant mortality rate target for the United States is 11, a goal unlikely to be achieved in Missouri at our current rate of progress.[9]

In the past, public health focused on infectious disease and basic food, sewage and water control. The dramatic gain in life expectancy for Americans from less than 50 years in 1900 to more than 75 years in 1990 is largely due to these activities.[10] The so-called new morbidities including new infectious diseases, chronic diseases, injuries and violence present new challenges to the public health system. Yet the methodology for intervention remains the same: assessing the extent of the problem, developing appropriate intervention strategies, motivating the "social machinery" to implement these programs and finally evaluating for effectiveness and feeding that information back to the policy development phase. This approach can be extremely successful when paired with the medical care, educational and social systems to improve overall health status.

In a universal, comprehensive health care system, the majority of individuals and families will receive their care from traditional medical care providers. This should relieve the strain on the public health system and allow it to refocus its efforts toward new and improved strategies to raise the standard of living for Missourians.

During this transition, it is incumbent upon the public health system to forge a true partnership with the medical care system. Community medical providers and public health agencies together will keep the public healthy. Local health agencies and officials must now

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## Table 1. Consensus Set of 18 Health Status Indicators with Year 2000 Targets: United States 1990 and Missouri 1990 and 1992

| Indicator | U.S. 1990 | Missouri 1990 | Missouri 1992 | U.S. 2000 target | MO 2000 target |
|---|---|---|---|---|---|
| **Infant death rate per 1,000 live births** | | | | | |
| 1. Total | 9.2 | 9.4 | 8.5 | 7 | 7 |
| 1a. White | 7.6 | 7.7 | 6.9 | - | - |
| 1b. Black | 18.0 | 18.2 | 16.0 | 11 | 11 |
| **Death rates per 100,000 population** | | | | | |
| 2. Motor vehicle crash | 18.5 | 21.1 | 19.5 | 16.8 | 19 |
| 3. Work-related injury | 2.3 | 2.5 | 2.5 | - | - |
| 4. Suicide | 11.5 | 12.6 | 11.5 | 10.5 | - |
| 5. Lung cancer | 39.9 | 44.6 | 44.9 | 42 | 48.0 |
| 6. Breast cancer (female) | 23.1 | 23.6 | 20.0 | 20.6 | 20.0 |
| 7. Cardiovascular disease | 189.8 | 195.0 | 189.6 | | |
| 8. Homicide | 10.2 | 9.6 | 12.3 | 7.2 | 6.0 |
| 9. All causes | 520.2 | 523.1 | 517.1 | - | - |
| **Reported incidence per 100,000 population** | | | | | |
| 10. AIDS | 17.4 | 11.7 | 12.7 | (see note) | 7 |
| 11. Measles | 11.2 | 2.0 | 0.0 | 0 | 0 |
| 12. Tuberculosis | 10.3 | 6.1 | 4.7 | 3.5 | 3.5 |
| 13. Syphilis, primary+secondary | 20.1 | 5.3 | 22.5 | 10 | 10 |
| **Risk factors** | | | | | |
| 14. Low birth weight percent | 7.0 | 7.1 | 7.3 | 5 | 5 |
| White (mother) | 5.7 | 5.8 | 6.0 | - | - |
| Black | 13.3 | 13.3 | 13.6 | 9 | - |
| 15. Percent births to adolescents | 4.7 | 5.2 | 5.5 | | |
| White (mother) | 3.6 | 3.8 | 4.0 | | |
| Black | 10.1 | 12.3 | 12.4 | | |
| 16. Late/no prenatal care percent | 24.2 | 21.4 | 19.5 | 10 | - |
| White (mother) | 20.8 | 17.6 | 16.0 | - | - |
| Black | 39.4 | 39.7 | 36.1 | 10 | - |
| 17. Childhood poverty percent | 17.9 | 17.4 | - | - | - |
| 18. Percent in country with air quality standard exceedence | 32 | 27.1 | 22.9 | 15 | - |

**Notes by indicator number:**

1: Rate per thousand live births of deaths among infants under one year of age
2,4-9: Death rates are age-adjusted using 1940 US population as standard.
3: Not age-adjusted. US rate is for 1991, for 32 states + New York City, per 100,000 population.
6: Female breast cancer, per 100,000 females
7: Includes heart disease, stroke, other
10: Reports during year. US target is 98,000 cases, based on holding AIDS incidence to estimated 1993 level.
11: Both targets are for "indigenous" cases, but annual rates are based on actual cases regardless of source. Targets are zero cases.
14: Percent of total liveborn infants weighing under 2,500 grams at birth
15: Births to females age 10-17 as percent of total live births
16: Percent of live-born infants whose mothers did not receive care during first trimester (excluding unknown)
17: Percent of children under 18 years old in families at or below poverty level, based on 1989 income.
18: Percent living in a county which had pollutants exceeding US EPA air quality standards at least once during the year.

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plan health care arrangements in their community. It is only in this way we can assure that populations, especially the most vulnerable, receive the services they need.

In a reformed system, local health officials have the opportunity to forge new partnerships, develop quality assurance mechanisms, and become the experts on community needs assessment and evaluation. Public health agencies must become the experts in data systems to monitor health and illness trends, in community epidemiology, in environmental health protection and in community-based health promotion. They will define health threats, inventory local resources and identify scarce resources. Local health officials will also assure that all populations in need have achieved basic access to health services and if this has not yet occurred, may continue the direct delivery of services during this transition phase.

At the state level, the Department of Health will be intimately involved in health reform efforts and will evaluate its own structure to determine the most appropriate roles for the Department in the future. These will undoubtedly include at least: expertise in state-based population health trends, development and dissemination of standard setting for environmental protection for local communities, coordination of health resources, and assessment of quality of the entire system based on population-based outcome measurements. The State Department of Health must be the catalyst in integrating the population-based health system with the medical care system. The United Kingdom has shown leadership in this area. The National Health Reform Act of 1993 mandates that community assessments be done in every region of the country and that health providers be accountable for improved health status of the population, not just of those individuals in their institution or practices.[11]

## CONCLUSION

Reform of the medical care system in our country is not enough. We have expected the medical care system to address health, social and medical problems, yet we have not made a commitment as a society to address those critical elements that directly affect our population's health. Addressing the health of our citizens overall is far more complex than addressing the medical system alone. Together, we must seriously tackle cost-control in the medical care system. Then we must assure equity and full access for all of our citizens. Our next challenges include coping with our aging population and directly dealing with death and dying issues, coping with the excesses of technology, learning more about the effectiveness of our interventions, developing a plan to manage our health provider surpluses and shortages and most importantly, extending our concern from the delivery of health care to the enhancement of health.

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## The Author

Dr. Kivlahan is the director of the Missouri Department of Health.

**Reprint requests to:**
**Coleen Kivlahan, MD, MSPH**
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# Electronic Communication on the Internet

Timothy B. Patrick, PhD and MaryEllen C. Sievert, PhD

Regular communication among peer medical professionals is beneficial because it allows for timely exchange of information which will support problem solving activities and the continuing process of professional education. For many physicians, however, the regular give and take of communication with peers may not have been a part of everyday professional life since medical school. Even for those affiliated with large institutions, communication may be limited to others in that same institution. However, any physician who has a computer, a modem, and appropriate communications software can change this situation. So equipped, the physician may gain access to the Internet and may then communicate with peers in both this country and around the world.

The Internet is a vast collection of computer networks, and in order to gain access to the Internet it is necessary first to gain access to one of these computer networks. For those physicians affiliated with a large institution, obtaining access to the Internet may be easily accomplished if the institution itself maintains a computer network which is connected to the Internet. Physicians near colleges or universities may be able to gain access through those institutions, for example, via the institution's connection to MOREnet (Missouri Research and Education Network). However, if this is not the case, the physician may still obtain access to the Internet through the services of a commercial Internet access provider. Examples of such commercial access providers are UUNET Communication Services, Performance Systems International (PSI), and Sprintlink.

Given access to the Internet, the possibilities for information exchange with peer professionals are truly overwhelming. Three of the more popular vehicles for exchange of information are electronic mail (e-mail), special interest discussion lists, and bulletin board systems (BBS).

E-mail may serve much the same purpose as ordinary postal service mail, viz., it allows you to send messages to other individuals, albeit at a much faster rate than ordinary mail. E-mail is not, however, suited to all of the purposes to which ordinary mail is suited. For example, e-mail is not at the present time suited to the transfer of legal documents. Note also that there is a difference between e-mail and fax. A fax transmits the image of a paper document across the phone system; e-mail is based on communication between computers, which may or may not involve the phone system. Moreover, an e-mail message is typed at the computer keyboard and may never need to exist on paper, or in "hard copy" form.

One of the advantages of e-mail over ordinary mail is that with e-mail it is much easier than it is with ordinary mail to send the same message to all of the individual members of a large group. To accomplish this with ordinary mail would require you to send multiple copies of the letter, each in its own stamped envelope, each addressed to some particular member of the group. But with e-mail, one may define a group, essentially just a list of individuals, and then in one fell swoop dictate that the message should be sent to all of those individuals by specifying that the message should be sent to the group.

The ability of e-mail to facilitate message exchange between individuals and the members of a group provides the basis for special interest discussion lists, commonly referred to simply as "lists." These lists support discussions among people with the same or similar interests, but the members do not necessarily know each other. When one has something to add to the discussion, one simply sends e-mail to the list, i.e., to all of the individuals included on the list. There are currently several thousand special interest discussion lists operating on the Internet, covering a wide variety of topics, some of which may be of interest to the physician. Examples of discussion lists currently in operation are Biomed-L, a discussion list devoted to topics in biomedical ethics; Lasmed-L, a discussion list devoted to discussion of the use of lasers in medicine; and D-Oral-L, a discussion list devoted to discussion of topics in oral microbiology and immunology.

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Opportunities for exchange of information among peers are also provided by Internet bulletin board systems. A bulletin board system functions much like an ordinary cork bulletin board. It is a place where information may be posted for everyone to see. One example of a bulletin system which could be of interest is ET-NET (Educational Technologies Network), a bulletin board on computer software for the education of health professionals. Some bulletin boards allow individual users to post information on the bulletin board. Other, "read only" systems reserve that right exclusively for the managers of the bulletin board. But in either case, individual users are allowed to connect or "login" to the computer supporting the bulletin board and to examine the information posted there.

Another potential use of the Internet is to access on-line library catalogs. Examples of Internet accessible on-line library catalogs are LUMIN (University of Missouri system), MELVYL (University of California system), and CARL (Colorado Alliance of Research Libraries). Those seeking more information about on-line library catalogs can access the database "Internet-Accessible Library Catalogs & Databases."

For those wanting to gain access to the Internet and take advantage of the possibilities it offers for exchange of information with peer professionals, the following references provide details and instructions.

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## ACKNOWLEDGEMENT

This publication was supported in part by grant number LM07089 from the National Library of Medicine. Its contents are solely the reponsibility of the authors and do not necessarily represent the official views of the National Library of Medicine.

## The Authors

**Timothy B. Patrick, PhD,** is a post-doctoral fellow in Medical Informatics at the University of Missouri-Columbia. His research interests are High Performance Computing and Communications, and Information Systems for Patients. **MaryEllen Sievert, PhD,** is an associate professor in the School of Library and Informational Science at the University of Missouri-Columbia. She has current research funding in search techniques for full-text databases.

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# Histoplasmosis in Missouri: Historical Review and Current Clinical Concepts

David S. McKinsey, MD; David L. Smith, MD;
Michael R. Driks, MD, and Mary C. O'Connor, MD

**Histoplasmosis is particularly common in Missouri, and many important clinical observations about the disease were made in this state in the 1950s and 1960s. When the AIDS epidemic spread to Missouri in the mid-1980s, histoplasmosis became recognized as a common and important opportunistic infection among Missourians with AIDS. Clinicians must maintain a high level of suspicion for histoplasmosis in any HIV-infected patient who presents with unexplained fever, particularly if the patient has evidence of hepatosplenomegaly, generalized lymphadenopathy, pancytopenia, abnormal liver function tests, or bilateral pulmonary infiltrates. The diagnosis of histoplasmosis can be established rapidly by observation of organisms on peripheral blood smear or bone marrow biopsy specimens or by Histoplasma Polysaccharide Antigen testing. The diagnosis can be confirmed by blood cultures in most cases. Histoplasmosis in AIDS is invariably fatal if not treated. Treatment consists of two phases: initial induction therapy and subsequent lifelong maintenance therapy. Amphotericin B and itraconazole are extremely effective for induction and maintenance therapy; fluconazole appears to be effective maintenance therapy. Strategies for the prevention of histoplasmosis in high risk patients are being evaluated currently.**

Histoplasmosis, an infection caused by the dimorphic soil fungus *Histoplasma capsulatum*, is an important disease in Missouri. The entire state is encompassed within the endemic area for histoplasmosis.[1,2] Because of the high frequency of exposure to *H. capsulatum* in Missouri, histoplasmosis is encountered much more frequently here than in most other states.

Studies conducted in Missouri have played an important role in defining the epidemiology, clinical manifestations, natural history, and treatment of histoplasmosis. With the onset of the AIDS epidemic, histoplasmosis has emerged as a common and serious opportunistic infection in Missouri AIDS patients. The purpose of this report is to review the history of histoplasmosis in Missouri and to discuss current concepts about histoplasmosis in AIDS.

## HISTORY OF HISTOPLASMOSIS IN MISSOURI

In the mid-1940s, large-scale histoplasmin skin test surveys in student nurses showed that histoplasmosis is endemic in Missouri.[2] Shortly thereafter, the United States Communicable Disease Center established a field station in Kansas City for the study of histoplasmosis, under the direction of Dr. Michael Furculow. During the next two decades Dr. Furculow and colleagues conducted extensive studies on histoplasmosis in Missouri and eastern Kansas. Histoplasmosis was shown to occur due to inhalation of *H. capsulatum* spores from soil contaminated with bat, pigeon, chicken, or starling droppings.[3] The common occurrence of asymptomatic infection in Missouri was documented: it was shown that asymptomatic infection occurs in 3% of Kansas City children per year.[4] Another study found that the adult population of Boone County has the highest prevalence of histoplasmin reactivity (100%) of any county in the United States.[5] Several point-source epidemics of histoplasmosis were reported in Missouri, generally in association with activities such as cleaning chicken coops or exploring caves.[3,6] A large urban epidemic among a group of Boy Scouts was studied in Mexico, Missouri and was linked to the cleanup of a city park where large numbers of starlings had roosted.[7]

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Anderson, et al. demonstrated that exposure to large inocula of *H. capsulatum* organisms causes self-limited acute pneumonitis and that pulmonary calcifications develop after the pneumonitis resolves.[8] The entity of chronic pulmonary histoplasmosis was recognized in patients who had underlying structural lung disease.[9] In a landmark paper published in 1956, Furculow and Brasher reported that several patients hospitalized at the Missouri State Sanitarium in Mt. Vernon for treatment of cavitary pulmonary tuberculosis actually had chronic pulmonary histoplasmosis, emphasizing the similarity between the two diseases.[10] Studies at Mt. Vernon also demonstrated the progressive, ultimately fatal course of chronic cavitary histoplasmosis and disseminated histoplasmosis.[11] Some Mt. Vernon patients with histoplasmosis were among the first ever to receive amphotericin B therapy, which is now recognized as the gold standard of treatment. During the past two decades, scientists at Washington University in St. Louis have made major contributions to our understanding of the mechanism of action of amphotericin B and the clinical use of this and other antifungal drugs in the treatment of histoplasmosis.[12,13]

## HISTOPLASMOSIS IN AIDS

An epochal event in the history of histoplasmosis in Missouri occurred with the onset of the AIDS epidemic in the state. The first cases of AIDS in the United States were reported in Los Angeles in 1981.[14] During the next five years, the majority of AIDS cases occurred in cities on the east and west coasts of the United States, outside the endemic region for histoplasmosis. Histoplasmosis was not included in the Centers for Disease Control's initial list of AIDS-defining opportunistic infections.[15] As the AIDS epidemic spread to the Midwest in the mid-1980s, however, cases of histoplasmosis began to be observed in patients with AIDS in Missouri, Indiana, Tennessee, Texas, and other states in the endemic area for histoplasmosis, and the disease therefore was added to the CDC's list of AIDS-defining opportunistic infections in 1985.[16]

Because new cases of histoplasmosis will continue to occur in patients with AIDS in Missouri, it is important for all Missouri physicians who care for patients with AIDS to be knowledgeable about this disease. The remainder of this report will review current concepts about the incidence, pathophysiology, clinical manifestations, diagnosis, treatment, and prevention of histoplasmosis in patients with AIDS.

### Incidence

Prior to the AIDS epidemic, the incidence of histoplasmosis varied considerably even within the endemic region; indeed, marked variation in histoplasmin reactivity was detected within individual communities.[17] This variability has held true during the AIDS epidemic. In cities outside the endemic area for histoplasmosis, the disease is uncommon: less than 2% of AIDS patients in New York City have had histoplasmosis.[18] Within the endemic area, the frequency of histoplasmosis in AIDS has varied from 4% in Houston[19] to 30% in Indianapolis.[20]

In Kansas City, among 1,689 patients with AIDS reported to the Health Department as of June, 1993, 196 (12%) had histoplasmosis (G. Hoff, personal communication). This is likely an underestimate, as many cases of histoplasmosis may not be reported. In our private practice at three Kansas City community hospitals (Research Medical Center, Trinity Lutheran Hospital, Baptist Medical Center), 21.5% of patients with AIDS have had histoplasmosis,[38] which is the second most common initial opportunistic infection after *Pneumocystis carinii* pneumonia. Histoplasmosis is much less common in St. Louis, where the local health department had recorded only 7 cases among 1,083 (0.7%) patients with AIDS as of July, 1992.[22] Even allowing for under-reporting, it is clear that less than 5% of St. Louis AIDS patients develop histoplasmosis. (F. Manian, personal communication). There is no apparent explanation for the marked variation in prevalence of histoplasmosis in AIDS between the two cities.

### Pathophysiology

In the general population, nearly all *H. capsulatum* infections are asymptomatic. Symptomatic pulmonary histoplasmosis occurs in less than 1% of infected persons and disseminated histoplasmosis develops in less than 1 per 1,000.[23] In marked contrast, virtually all HIV-infected patients with documented histoplasmosis have disseminated infection. All 93 AIDS patients with histoplasmosis diagnosed in our practice have had disseminated disease. The striking propensity for dissemination of infection in HIV-infected persons reflects their profound cellular immunodeficiency. The median absolute CD4 count was 46/µL in 48 Kansas City AIDS patients with histoplasmosis evaluated retrospectively[21] and 21/µL in 10 patients who developed infection while being followed in a prospective cohort study.[24] Eighty-nine percent of patients in that study had CD4 counts below 150/µL.[21]

There is uncertainty about whether the inciting event in histoplasmosis in AIDS is dissemination of newly-acquired infection, reactivation of a latent focus of histoplasmosis persisting after remote infection, or both mechanisms. A well-documented epidemic of histoplasmosis in patients with AIDS at a prison in Chillicothe, Ohio,[25] and the year-to-year variability in the incidence of histoplasmosis which has been observed in Indianapolis,[35] suggest that dissemination of exogenously-acquired infection occurs. On the other hand, reports of histoplasmosis in non-endemic areas such as New York City[18] and Europe,[26] among persons who previously resided in endemic regions, suggest that reactivation of latent infection occurs. The relative importance of these two possible pathogenetic mechanisms is being assessed in an ongoing prospective cohort study being conducted by the Kansas City AIDS Research Consortium.

During the hematogenous spread of *H. capsulatum* infection, organisms lodge in numerous sites throughout the body, primarily in the organs of the reticuloendothelial system (liver, spleen, lungs, lymph nodes, bone marrow, gastrointestinal tract.) The widespread distribution of infection leads to a multisystem disease with a wide variety of clinical manifestations.

## Clinical Manifestations

Disseminated histoplasmosis may cause either a subacute febrile wasting illness or a fulminant life-threatening illness associated with multiple organ system failure. Approximately 90% of patients have the subacute form of the disease, generally associated with protracted fever and chills and substantial weight loss. Cough and dyspnea occur in about half of cases. Twenty percent of patients have diarrhea. Hepatosplenomegaly or generalized lymphadenopathy are noted in one-third of cases, and nodular skin lesions are seen in 10%.[19,20]

A variety of unusual clinical manifestations of histoplasmosis have been reported. Gastrointestinal involvement presumably occurs due to hematogenous spread of organisms to lymphatic tissue in the Peyer's Patches lining the gastrointestinal tract.[27] Ulcerative lesions or mass lesions of the lower gastrointestinal tract have been observed.[28] Central nervous system involvement (meningitis, encephalopathy, or focal brain lesions) has been reported in approximately 20% of patients.[20] Other unusual manifestations of histoplasmosis in AIDS include chorioretinitis[29] and pericarditis.[19,20] Oral ulcers, seen commonly in HIV-seronegative patients with disseminated histoplasmosis, are uncommon in AIDS patients with histoplasmosis.[6,19]

Fulminant infection is seen in approximately 10% of cases, and carries an extremely poor prognosis. The clinical presentation mimics gram-negative sepsis; hypotension, respiratory failure, renal failure, coagulopathy, and encephalopathy can occur.[20,30] This clinical syndrome appears to be unique, as it had not been reported as a manifestation of histoplasmosis prior to the AIDS epidemic.

## Diagnosis

Several laboratory studies are useful in establishing the diagnosis of histoplasmosis. The diagnosis is often suggested by characteristic abnormalities on routine laboratory and radiographic studies (complete blood count, liver function tests, chest radiograph). More specialized tests can confirm the diagnosis rapidly in many cases.

Abnormalities of the complete blood count are seen frequently. Pancytopenia was noted in 54% of Kansas City AIDS patients with histoplasmosis, probably because of hypoproduction of hematopoietic elements due to infiltration of the bone marrow by *H. capsulatum* organisms. In 92% of patients, immature granulocytes were observed on peripheral blood smear; this "left shift" is uncommon in other opportunistic infections in AIDS and is a clue to the diagnosis of histoplasmosis. *H. capsulatum* organisms were observed during careful review of peripheral blood smears in 38% of cases, enabling rapid confirmation of the diagnosis in these patients.[31]

Serum lactate dehydrogenase levels are often markedly elevated: the mean LDH level was 1,085 (range 177-5920) in 13 patients we reported. Hepatic infiltration occurs routinely in disseminated histoplasmosis; therefore, liver enzymes are often elevated. Serum levels of alanine aminotransferase and alkaline phosphatase have been elevated in most cases.[31] Chest radiographs are abnormal in two-thirds of cases. Bilateral interstitial pulmonary infiltrates, often with a reticulo-nodular appearance, are seen frequently and can mimic the appearance of *Pneumocystis carinii* pneumonia. Pulmonary calcifications are noted on almost all chest radiographs.[32,33]

*H. capsulatum* serology studies are moderately sensitive and highly specific in the diagnosis of histoplasmosis in AIDS. Complement fixation (CF) studies for the yeast antigen ($\geq$ 1:8 titer) and immunodiffusion (m band) each have sensitivity exceeding 70%. All *H. capsulatum* antibody tests are extremely specific; CF for the yeast antigen ($\geq$ 1:32 titer), CF for the mycelial antigen ($\geq$ 1:8 titer), m band immunodiffusion, and latex agglutination each exceed 97% specificity.[21] Despite the high specificity of serology studies, the clinical usefulness of these tests has been surpassed by the newly developed Histoplasma Polysaccharide Antigen (HPA) test.

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HPA has been quite useful in establishing the diagnosis of histoplasmosis rapidly. The sensitivity of HPA testing has been 97% and 79% for urine and serum specimens, respectively, in patients with AIDS and histoplasmosis.[34] Furthermore, HPA levels drop with successful treatment of histoplasmosis[35] and rise prior to clinical relapse,[36] so serial determinations of HPA are useful in assessing response to treatment. The specificity of HPA approaches 100%.[34]

Bone marrow aspiration and biopsy can establish the diagnosis rapidly. In 38% of cases, *H. capsulatum* organisms are observed in bone marrow aspiration or biopsy specimens.[31] Bone marrow granulomas are seen in only 15% of cases, but the presence of bone marrow granulomas suggests the diagnosis of histoplasmosis in the appropriate clinical setting.[31] Bone marrow cultures grow *H. capsulatum* in 77% of cases.[31]

Blood culture (using the lysis centrifugation method) is one of the most sensitive tests for histoplasmosis in AIDS. Ninety-five percent of HIV-infected patients with confirmed histoplasmosis in our practice had positive blood cultures.[37] Cultures usually become positive after 7 to 14 days incubation. In contrast, blood cultures are positive in a lower percentage of HIV-seronegative patients with disseminated histoplasmosis and the incubation period is often longer. Cultures of skin biopsy specimens, bone marrow, liver, lymph nodes, gastrointestinal biopsy specimens, bronchoalveolar lavage fluid, and cerebrospinal fluid have been positive in the majority of cases.[19,20]

## Treatment

Disseminated histoplasmosis in AIDS is invariably fatal if not treated. Treatment regimens for disseminated histoplasmosis which were established prior to the AIDS epidemic are clearly not sufficient in patients with HIV infection: although patients often respond well to treatment with amphotericin B, approximately 80% will develop relapse after completion of a standard treatment regimen.[20] In view of the high probability of relapse after initial treatment, lifelong maintenance antifungal therapy is recommended. Thus, treatment consists of two phases: initial induction therapy and long-term maintenance therapy.

Several recent studies have shown that disseminated histoplasmosis can be treated effectively with currently available antifungal drugs. Long-term amphotericin B therapy has been the most extensively studied form of treatment. Two regimens have been described: (A) a 2,000 mg course of amphotericin followed by 50-80 mg once weekly, continued indefinitely; (B) a 1,000 mg initial course followed by 50 mg every other week, continued indefinitely. We reported our experience with 36 patients who received either of these two regimens; the overall response rate was 97%.[38] The median survival of patients who received long-term amphotericin therapy was 19 months (range, 2-36 months).[21] Despite administration of extraordinarily high doses of amphotericin (up to 12,000 mg) in some cases, dose-limiting toxicity did not occur. The major problem with this treatment regimen was the need for long-term intravascular access. Predictably, bacteremia and other intravascular device-related infections were common in patients who had indwelling central venous catheters; 63% of these patients developed catheter-associated infections.[37,38]

There has been considerable interest in the use of oral antifungal drugs for treatment of histoplasmosis in AIDS. The oral azole antifungal drugs (ketoconazole, itraconazole, and fluconazole) have been studied for both induction and maintenance therapy.

The efficacy of ketoconazole induction therapy is extremely poor: less than 10% of patients respond to treatment. Furthermore, at least 50% of patients who receive ketoconazole maintenance therapy experience relapse of histoplasmosis.[20] Thus, ketoconazole is not recommended for either induction or maintenance treatment.

Itraconazole has been assessed for both induction and maintenance therapy. In an AIDS Clinical Trials Group (ACTG) study, itraconazole induction therapy, at a dose of 200 mg BID, was effective in 85% of patients with non-life threatening disseminated histoplasmosis.[39] Another ACTG study demonstrated that maintenance itraconazole therapy, 200 mg daily, was effective in preventing relapse of infection in 97% of cases after a follow-up period of 1 year.[40]

Fluconazole induction therapy was assessed in an ACTG protocol which concluded recently. Medical centers in Kansas City and St. Louis participated in that study. At this point, data are too preliminary to allow conclusions to be drawn about the efficacy of this form of treatment. Fluconazole maintenance therapy was effective in preventing relapse of infection in 85% of patients after a median follow-up period of 39 weeks in one retrospective study.[41] Efficacy was higher when a dose of at least 200 mg daily was used.[41]

In summary, amphotericin induction and maintenance therapy is extremely effective but has drawbacks in that intravenous treatment is necessary. Itraconazole is effective for induction and maintenance therapy in non-life threatening cases. Fluconazole is being assessed for induction therapy and appears effective for maintenance therapy. Most authorities currently recommend induction therapy with amphotericin B in life-threatening cases or with itraconazole in mild to moderate cases, followed by lifelong maintenance treatment with itraconazole.

## Prevention

The importance of prophylaxis against opportunistic infections in AIDS has become recognized increasingly. Because of the high risk of histoplasmosis in patients residing in endemic areas such as Missouri, there has been considerable interest in the development of effective prophylactic regimens.

Only one histoplasmosis prophylaxis study has been reported. Nightingale et al,[42] administered fluconazole 100 mg daily to patients in Dallas with CD4 lymphocyte counts $< 69/\mu L$. There was no reduction in the incidence of histoplasmosis compared to historical control patients who did not receive antifungal medication.

An ongoing ACTG study is assessing the efficacy of fluconazole versus mycostatin troches (i.e. placebo) in the prevention of deep mycoses including histoplasmosis. Aside from the ACTG center at Washington University in St. Louis, most of the study centers are not located in areas where histoplasmosis is endemic. It is expected that too few cases of disseminated histoplasmosis will occur to enable assessment of the efficacy of fluconazole in preventing histoplasmosis (W. Powderly, personal communication).

The Mycoses Study Group (MSG) of the National Institute of Allergy and Infectious Diseases has begun a randomized trial of itraconazole versus placebo in the prevention of histoplasmosis in HIV-infected patients with CD4 lymphocyte counts $\leq 150/\mu L$. Until results from the ACTG and MSG studies are available, the routine use of systemic antifungal prophylaxis against histoplasmosis cannot be recommended.

## Acknowledgement

The authors thank Martin Mason for assistance with data collection and Donna Heidelberger for manuscript preparation.

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## The Authors

The authors are from Kansas City, Missouri. Drs. McKinsey and Smith are from Research Medical Center. Dr. Driks is from Baptist Medical Center. Dr. O'Connor is from Trinity Lutheran Hospital.

**Direct correspondence and reprint requests to:**
**David S. McKinsey, MD**
**Dept. of Epidemiology and Infectious Disease**
**Research Medical Center**
**2316 East Meyer Boulevard**
**Kansas City, Missouri 64132**
**Telephone (816) 276-4038; FAX (816) 276-3763**

# A Seven Year Experience with Kidney Transplantation for Pediatric End Stage Renal Disease

Thomas S. Helling, MD; Paul W. Nelson, MD; Leslie Reed, RN; Uri Alon, MD;
Stanley Hellerstein, MD and Bradley A. Warady, MD

**Renal transplantation for pediatric end stage renal disease (ESRD) is a preferred option in dealing with these chronically ill patients. The pediatric renal transplant program at University of Missouri-Kansas City School of Medicine was begun in 1986 at St. Luke's Hospital and subsequently shifted to the Children's Mercy Hospital as experience was accumulated. To date 35 transplants have been performed in 31 recipients. Fifty-one per cent of the patients transplanted were adolescents (older than 13 years) and 91% of the patients were older than 4 years. Sixteen of the 35 transplants were from living related donors and 19 patients received their kidneys from cadaveric donors. Immunosuppression consisted of corticosteroids, azathioprine, cyclosporine and antilymphoblast globulin. No patients died following transplantation with a functioning kidney. Allograft survival with living related transplants at one year and three years was 91% and 86% respectively. Cadaveric allograft survival at one year and three years was 78% and 46% respectively. Most kidneys were lost due to either acute or chronic rejection although there were three patients who lost their kidney due to primary nonfunction, including one child age 23 months. The growth pattern of all but the youngest children (≤2 years) following transplantation showed no evidence of accelerated growth. Results in this early series of pediatric renal transplant patients is encouraging from the standpoint of patient and allograft survival and even though accelerated growth is not seen in the older children, it seems to offer a better quality of life for children with end stage renal disease.**

Pediatric end stage renal disease (ESRD) is a rare but potentially catastrophic problem. The U.S. Renal Data System report[1] for 1988 indicated 11 patients per million aged 0-19 years began ESRD therapy. The majority of these children were between the ages of 11 and 15 years. Although children suffer many of the same effects of ESRD as adults, such as nutritional deficiencies, anemia, hyperparathyroidism, and renal osteodystrophy, the consequences are more significant because of impairment of intellectual development, social psychological development and physical growth[2,3]. Although recombinant human erythropoietin ameliorates the anemia of chronic renal failure in children[4], and recombinant human growth hormone fosters normal growth rates in children on chronic dialysis[5], dialysis therapy, whether peritoneal or hemodialysis, significantly impairs a normal life-style. With the advent of new immunosuppressive agents in the 1980's, renal transplantation for pediatric ESRD has become an increasingly attractive alternative therapy for this patient population. The hope of renal transplantation is to normalize physical growth and improve psychosocial development while removing the need for chronic dialysis therapy. To justify this approach, results with renal transplantation for patient and allograft survival need to approximate those established for adult ESRD patients. We recently reviewed our experience with these goals in mind.

## CLINICAL MATERIAL

The pediatric renal transplant program was developed jointly by St. Luke's Hospital and the Children's Mercy Hospital, Kansas City, Missouri, in affiliation with the University of Missouri, Kansas City School of Medicine in 1986. Over the subsequent seven years 35 transplants have been performed in this program. Initially the renal transplants were performed at St. Luke's Hospital but, as the program developed and younger children were considered for transplantation, the work shifted to The Children's Mercy Hospital where the last 10 transplants have been done. Preoperative assessment and postopera-

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tive follow-up have been done jointly by the transplant surgeons and pediatric nephrologists and long-term follow-up care has been provided in the pediatric nephrology clinic at The Children's Mercy Hospital.

The renal transplants were performed in a standardized fashion using the iliac fossa in children heavier than 15 kg. Either the external iliac artery or the hypogastric artery were used for the arterial anastomosis. The neocystoureterostomy was performed in an extravesical fashion. In children smaller than 15 kg the kidneys were placed intra-abdominally using the aorta and inferior vena cava as the vascular conduits and anastomosing the ureter to the bladder with an extravesical approach. All children were monitored intraoperatively using central venous pressure recordings. Hydration was felt vital to the success of the transplant by preserving adequate renal blood flow following reperfusion of the allograft. Attempts were made to keep the central venous pressure above 15 mm Hg by aggressive fluid resuscitation prior to reperfusion. This was particularly important in smaller children. Native kidneys were not removed unless intractable hypertension was present or evidence of recurrent pyelonephritis from reflux nephropathy was documented.

The immunosuppressive regimen employed incorporated a multidrug approach. Intraoperatively methylprednisolone 7 mg/kg/day was administered intravenously. Prednisone was then begun on the first postoperative day at a dose of 2 mg/kg/day tapered to 1 mg/kg/day by postoperative day 10. The goal was a continued reduction of Prednisone to 0.2 mg/kg/day by four months. Azathioprine was administered at 2.5 mg/kg/day and continued thereafter at that dosage. Cyclosporine was administered once renal function was obvious at a dose of 12 mg/kg/day in two divided doses. The doses were adjusted to the Cyclosporine blood level as required. Antilymphoblast globulin was administered at a dose of 20 mg/kg/day for the first 10-14 days.

Blood flow and Hippuran renal scans were routinely obtained on the first postoperative day and repeated thereafter as clinically indicated. Rejection episodes were diagnosed using clinical criteria with supplemental renal biopsy. Treatment for acute rejection consisted of intravenous bolus administration of methylprednisolone or administration of antithymocyte globulin or OKT3 monoclonal antibody for those rejections refractory to steroid intensification. Removal of the transplant kidney was usually performed if irreversible rejection or allograft loss occurred and the reinstitution of peritoneal or hemodialysis was required.

TABLE I

**Causes of ESRD in 31 Pediatric Patients**

| | |
|---|---|
| Obstructive uropathy | 4 |
| Reflux nephropathy | 4 |
| Focal segmental glomerulosclerosis | 4 |
| Hemolytic uremic syndrome | 3 |
| Interstitial nephritis | 2 |
| Membranoproliferative GN | 2 |
| Dyplastic kidneys | 2 |
| Wegener's granulomatosis | 1 |
| Chronic glomerulonephritis | 1 |
| Henoch Schonlein purpura | 1 |
| Mesangioproliferative GN | 1 |
| Congenital nephrotic syndrome | 1 |
| Medullary cystic disease | 1 |
| Wilm's tumor | 1 |
| Cytonosis | 1 |
| Bartter's syndrome | 1 |
| Unknown | 1 |

TABLE II

**Patient Characteristics (31 patients, 35 transplants)**

| | |
|---|---|
| **● Age (years)** | |
| <2 | 1 |
| 2-4 | 2 |
| 5-12 | 14 |
| 13-17 | 15 |
| 18-21 | 3 |
| **● Sex** | |
| M | 17 |
| F | 14 |
| **● Race** | |
| White | 25 |
| Black | 4 |
| Hispanic | 2 |
| **● Weight at transplantation** | |
| >30 kg | 18 |
| 20-30 kg | 12 |
| 15-20 kg | 2 |
| 10-15 kg | 1 |
| <10 kg | 2 |
| **● Type of transplant** | |
| LRD | 16 |
| CAD | 19 |

**TABLE III**

**Allograft survival in 35 pediatric renal transplants**

**Allograft Survival**

| | | |
|---|---|---|
| **Living related donors** | | |
| 1 y | 10/11 | 91% |
| 2 y | 7/8 | 88% |
| 3 y | 6/7 | 86% |
| **Cadaveric donors** | | |
| 1 y | 14/18 | 78% |
| 2 y | 10/15 | 67% |
| 3 y | 6/13 | 46% |

## RESULTS

Over the seven year course of this program, 31 patients have received 35 renal transplants. The etiologies of ESRD in these patients requiring transplantations are listed in Table I. As can be seen from this Table, obstructive uropathy, reflux nephropathy and focal segmental glomerulosclerosis, were the more frequent causes of ESRD. Five patients were transplanted prior to institution of dialysis while 30 patients were on hemo- or peritoneal dialysis at the time of transplantation. Other characteristics of this patient population are outlined in Table II. Most (91%) of the patients were older than four years of age and 51% were adolescents at the time of their transplant. Eighty-six percent of the children were 20 kg or heavier at the time of transplantation. There were 16 transplants performed from living related donors and 19 patients received their transplants from cadaveric donors.

Four patients received intra-abdominal transplants. Two of these patients were under 10 kg, a third was 11 kg, and the fourth 19 kg. The remainder (31) of the transplants were placed in the iliac fossa despite, at times, a rather marked disparity in size between donor kidney and recipient.

No patients died following transplantation with a functioning kidney. There were two deaths among the 31 transplant recipients after their kidneys had been removed and they returned to dialysis. One patient, a 19-year-old, died six months after allograft failure (chronic rejection) from complications of a bowel obstruction. The second patient was a 15-year-old who died four months after allograft failure (acute rejection) from gastrointestinal bleeding.

Allograft survival using actuarial methods is depicted in Table III. Allograft survival at one year for living related donors and for cadaveric donors was 91% and 78%, respectively. Seven allografts have been lost. Three to rejection, three to primary nonfunction of the transplant, and one to recurrent disease.

Technical complications have been few. Five of the 35 transplants (14%) encountered complications requiring reoperation. One patient, found to have a dysplastic common iliac artery with reduced renal blood flow to the allograft, required femoral-femoral bypass at three months. One patient developed a small bowel2 obstruction requiring celiotomy and lysis of adhesions at 17 days post-transplant. One patient developed ureteral obstruction due to post-transplant stricture who required ureteral reimplantation at 31 months. One patient required ureteral reimplantation for recurrent allograft reflux nephropathy and one patient developed a urinoma requiring drainage at three days post-transplant from a leak of the neocystoureterostomy which spontaneously closed.

Of the three transplant recipients who experienced primary nonfunction, one was a child under 10 kg who received a living related donor kidney. The other two received their allografts from cadaveric donors, one of which was from a three year old donor with extremely small kidneys.

Physical growth characteristics are depicted in Table IV. The standardized height score of Krick[7] (Z score) was calculated as follows: Z score = [mean height for age - child's height]/SD of height for that age. Children 2-12 years old were, on average, more than 2 standard deviations (SDs) below norm and children 13-18 years old were more than 1.5 SDs below norm prior to transplantation. Following transplantation there was little change in the Z score ($\Delta$ Z) in either age group reflecting no "catch-up" growth. However, the two youngest patients ($\leq 2$ years) with functioning transplants did demonstrate accelerated growth as evidenced by a change in height Z score from -2.57 to -1.72 and -0.9 to -0.6 at one year and nine months following transplant, respectively.

The average length of hospital stay was 15 days with a range of 10 to 27 days.

## DISCUSSION

Initial results in renal transplantation in children were disappointing. Early reports from the University of Colorado[8] and the University of Minnesota[9] indicated poor patient survival and lower allograft survival than was found in adults. The advent of cyclosporine and sequential immunosuppressive therapy improved the picture considerably. In a

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## TABLE IV

**Mean change from baseline in standardized height scores in patients with allograft function at six month intervals grouped by age at transplantation.**

| | Prior to transplant | 6 mos | 12 mos | 18 mos | 24 mos |
|---|---|---|---|---|---|
| **2-12 years old** | | | | | |
| Mean Z score | -2.27 | -2.29 | -2.32 | -2.30 | -2.42 |
| Z score | | -0.02 | -0.05 | -0.03 | -0.15 |
| N | 14 | 14 | 13 | 13 | 8 |
| **13-18 years old** | | | | | |
| Mean Z score | -1.62 | -1.69 | -1.74 | -1.64 | -1.08 |
| Z score | | -0.07 | -0.12 | -0.02 | +0.54 |
| N | 9 | 9 | 9 | 4 | 3 |

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follow-up report from the University of Minnesota, Almond and colleagues[10] described improved patient and allograft survival with the use of methylprednisolone, prednisone, azathioprine, antilymphocyte globulin and cyclosporine. Patient survival rate improved to 100% at one year and overall allograft survival at one year was increased from 74% to 92% with sequential immunosuppression. Survival for living donor allografts increased to 93% from 80% with conventional immunosuppression. The pivotal drug responsible for this improvement was unquestionably cyclosporine. The important North American Pediatric Renal Transplant Cooperative Study (NAPRTCS)[11] examined 1,550 children receiving 1,667 renal allografts from 1987 to 1990. Among recipients of cadaver kidneys, 74% of the allografts survived one year and 62% survived three years. Among recipients of living donor kidneys, 89% of the allografts survived one year and 80% three years. With the use of sequential immunosuppression including cyclosporine we have also been able to obtain results in pediatric renal transplantation comparable to adults. We have found excellent patient survival with no deaths suffered during allograft function. Additionally we have experience good success with living donor allografts, 91% functioning at one year and 86% functioning at three years. While the results with cadaver transplantation were not as good with 78% of the cadaver allografts functioning at one year and 46% at three years, the success at three years may reflect the small number of allografts available for statistical analysis.

The challenge in the pediatric age group is transplantation of the child less than two years of age or less than 15 kg in size. In our young program we have had a limited experience with this age group. We have transplanted only one child less than two years of age and only three children less than 15 kg in size. In one of these small children, 23 months old, an intra-abdominally placed living donor kidney failed to function and was subsequently removed. Similar findings were noted by the NAPRTCS[11] which found an increased risk of allograft loss in transplant recipients less than two years of age. Transplantation in this age group or in children less than 15 kg is technically demanding and requires experience and expertise of the transplant surgeons as well as the anesthesiologist in careful intraoperative monitoring. We have also had anecdotal experience with primary nonfunction in a small (three year old) cadaver donor kidney. No longer do we consider pediatric cadaver donors less than five years of age for renal transplantation.

As seen from Table IV, linear growth in most children receiving transplantation was normal and not the "catch-up" growth that one would hope. The youngest children (two to 12 years old) had a height Z score greater than two SDs below the mean for their age at the time of transplant and this score changed very little following transplantation as measured at six month intervals except for the two youngest patients who exhibited accelerated growth. Likewise, the older children (13 to 18 years old) also had a significantly depressed height Z score which did not change following transplantation in six month follow up periods. The NAPRTCS[11] similarly found little change in the Z score for children greater than age six following transplantation but did demonstrate evidence of "catch-up" growth for children two to five years old, as we did in our two youngest recipients. The effect in this subpopulation, however, may be hidden by the preponderance of children older than two years. We were encouraged by the accelerated linear growth in our two youngest transplant recipients and as we transplant an increasing number of younger children (2-5 years) we are hopeful that we will continue to find this pattern of accelerated growth following transplantation. There are many factors responsible for retarded growth in pediatric patients with ESRD. The onset of adolescence before transplantation has been associated with diminished growth thereafter. There is a well known effect of corticosteroids on the growth of children even though a quick taper of the dose is recommended to the lowest possible daily maintenance dose to maintain adequate renal function. With the introduction of cyclosporine as an additional immunosuppressive agent, corticosteroids can be tapered more quickly and perhaps the effect on growth reduced[12,13]. We are also currently evaluating the effects of alternate day steroid therapy[14] and recombinant human growth hormone therapy[15] on the growth of this patient population.

In summary, results from our series of pediatric patients receiving renal transplantations over the course of seven years have been encouraging. There have been no patients whose death could be attributed to the transplant or immunosuppressive complications. A significant number of patients (46%) have received their kidneys from living related donors and the success of these transplants has been excellent. Of the five patients who required a reoperation for complications following their transplantation, none lost their allograft from these problems. It is clear that the smaller child, less than four years of age or 15 kg in size, represents a challenging problem in intraoperative and postoperative management. These children benefit most from the expertise of a pediatric transplant program which includes careful intraoperative monitoring by anesthesiologists and surgeons familiar with problems of small children, and postoperative follow-up care conducted by pediatric nephrologists, nurses, dieticians and social workers. Accordingly, children of all ages who are unfortunate victims of ESRD can now look forward to successful renal transplantation and an improved quality of life.

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Presented at the 25th annual meeting of the Missouri Chapter, American College of Surgeons, Lake of the Ozarks, Missouri, June 18-20, 1993.

## The Authors

The authors are from the University of Missouri-Kansas City School of Medicine, Kansas City, Missouri. Dr. Helling and Dr. Nelson are from the department of surgery. Ms. Reed and Drs. Alon, Hellerstein and Waraday are from the department of pediatric nephrology.

**Reprint requests to:**

**Thomas S. Helling, MD**
**4320 Wornall Road, Suite 308**
**Kansas City, MO 64111**
**(816)753-7460**

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# Replacing Physicians with Nurse Practitioners

Mary L. Vest, MSMA Medical Student Section AMA-Alternate Delegate

During a recent internship in Washington D.C. in the office of Senator John Danforth, I was made aware of proposed legislation which could drastically affect graduate medical education and the overall quality of the practice of medicine.

A bill, entitled the Primary Workforce Care Act of 1993, was introduced in late July by Senator Jay Rockefeller (D-W. Va.), Senator Dave Durenberger (D-Minn.) and Senator David Pryor (D-Ark.). The goal of this bill is to increase the number of primary care physicians, with the ratio of specialist to generalist training positions not to exceed 50/50 after three years. A generalist residency position is defined as family practice, general internal medicine, or general pediatrics. A limit on the number of first year residency training positions would be established at 110% of the number of U.S. medical graduates, with the goal of eliminating 11,000 residency slots over the next three years.

In order to make up for the reduced residency force, the Primary Workforce Care Act would shift money from residency training to nursing practitioner and physician assistant education, with the hope that these non-physicians healthcare professionals could provide 80% of the services currently provided by residents at a more economical rate.

The 1993 Merck Manual describes a study in Scotland in the early 1950s which examined the response of older people to illness. Although the health care seemed adequate, startling numbers of patients were identified with multiple medical problems that were unknown to the responsible physician. Another study of several elderly patients revealed an average of six diseases, with the primary physician unaware of half of the diagnoses. The phenomenon of multiple disorders in the elderly complicates treatment and diagnosis.

The example of the elderly patient demonstrates the complexity of patient care. In order to diagnose, the healthcare provider must not only know all the possible diseases but must understand the pathophysiology of those diseases. Such a knowledge base takes years of intense training to acquire. Even with years of advanced training, a physician can be easily confused by a complex patient in his or her care.

There is a big difference between non-physician professionals, such as nurse practitioners, and physicians. Nurse practitioners first obtain a BSN, bachelor of science in nursing, and then complete a 45 semester hour certification program. By comparison, most physicians attend four years of college, four years of medical school, three to nine years of postgraduate training. The curriculum of the nursing practitioner is not adequate for the complete diagnosis and treatment of the complex human body. For example, while over 30 state allow these non-physician practitioners to write prescriptions, nurse practitioners take a three hour semester course in pharmacology compared to the 200 plus hours of intensive pharmacology training medical students receive both in the classroom and on the hospital floors.

The American Nurses Association (ANA) at a hearing of the Physician Payment Review Commission called for the replacement of residents by advanced practice nurses in hospitals. The ANA cited in its testimony the "numerous studies have shown care provided by advanced practice nurses is equal to or better than that provided by physicians and is more cost-effective."[1,2]

The "numerous studies" showing nurse practitioners providing "equal to or better" care than physicians must be carefully scrutinized, especially the factors used to measure "quality of care." In the Health Technology Case Study 37, one study cited by the ANA, quality of care is rated by communication skills, counseling skills, interviewing skills, completeness of physical exams, a patient's knowledge about management plan given by providers, amount and depth of discussion regarding child health care, amount of advice, therapeutic listening, and support offered to patients.[2]

This study, like many other studies cited by the American Nursing Association, evaluates the quality of care on the basis of the strengths of nursing education, not medical education. Nursing education stresses health education and counselling, while medical education stresses disease pathophysiology, diagnosis, and treatment. While these studies measure the quality of histories and physical exams by completeness, they do not measure the nurse practitioner's ability to assimilate the

Continued on page 40

Continued from page 39

information into a diagnosis and to choose a proper course of treatment. These studies confuse the "quality of care" with the "art of care."

A review of the literature by the American Medical Association failed to reveal any studies on the actual replacement of residents with nurses except one in which nurse practitioners were used to extend physician care, not to replace physician residents. Initially, two nurse practitioners were used to "extend" the physician care of one physician. Later in this study, the number of nurse practitioners was increased to four per physician. The nurses worked eight-hour shifts, and were not placed in the emergency room, critical care units, or operating rooms. The use of four nursing practitioners to "extend" the physician care of one physician was not found to be cost-effective considering the salaries of nursing practitioners compared to residents. One St. Louis Hospital quotes salaries for nurse practitioners at $30,720 -$48,680 and residents' salaries at $28,000 - $37,640 per year.

And the costs are not likely to improve. If the nurse practitioners are going to assume greater responsibilities by performing more traditional physician duties as envisioned by the Senators sponsoring the Primary Workforce Care Act of 1993, malpractice insurance premiums for these non-physician healthcare providers will surely increase. A 1989 Harvard study indicated that the number of malpractice suits against nurse healthcare providers increased 31% during two consecutive six-year periods studied from 1976 to 1987. As the cost of nursing practitioners' malpractice insurance premiums rise, the salaries of these practitioners may soon near the salaries of primary care physicians. The actual savings of replacing resident physicians with less skilled health care providers must be carefully weighed.

Nurse practitioners work very successfully as extenders of physician care in residency programs and many physicians' private offices. However, extending physician care does not translate into assuming physicians' responsibilities. Legislation such as the Primary Workforce Care Act of 1993 must be approached with caution.

1. Verbal conversation with the Government Relations Department of the American Nursing Association.
2. Physician Payment Review Commission, Report to Congress. Third Edition.
3. Study shows nurse practitioner care may rival physician primary care. *American Nurse* 1993;2:3.

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AIR FORCE

## IN MEMORIAM

■ **Anthony D. Busch, MD,** Belleville, Illinois, died October 29, 1993, at age 87. He was the nephew of Adolphus Busch, founder of the Anheuser-Busch brewery. Dr. Busch received his medical degree at St. Louis University in 1937. From the 1940s to the 1960s he was clinical director of the St. Louis State Hospital. Dr. Busch was a clinical instructor in psychiatry at Southern Illinois University and a former assistant in clinical psychiatry at Washington University. For the last 30 years he was in private practice in Belleville. In 1967 he helped design a psychiatric unit at St. Elizabeth Hospital in Belleville. Dr. Busch was a member of the American Psychiatric Association and the American Society of Clinical Hypnosis.

■ **Thomas F. B. Darnell, MD,** Branson, Missouri, died October 31, 1993, at age 83. Dr. Darnell received his medical degree at the University of Kansas in 1937. He served in the Army Reserve in 1940 at the 42nd General Hospital in Brisbane, Australia. Dr. Darnell was in private practice as a dermatologist for 24 years in Columbia, Missouri. He was on staff at Boone County Center, Columbia Regional Hospital and Memorial Hospital in Jefferson City. Dr. Darnell was a consultant in dermatology at Ellis Fischel Hospital, Stephens College Health Center and the State Crippled Children's Hospital. He also served the State Hospital in Fulton and St. Mary's Hospital in Jefferson City. Dr. Darnell was a member of the Boone County Medical Society, the Missouri State and American Medical Associations, the Missouri Dermatological Society and American Academy of Dermatology.

■ **Donald W. Dickhaus, MD,** Columbia, Missouri, died November 1, 1993, at age 68. Dr. Dickhaus received his medical degree at Tulane University, New Orleans, in 1956. He served in the Army during World War II and the Korean War. Dr. Dickhaus was a professor of medicine at the University of Missouri and in private practice for 14 years in Columbia as a cardiologist. He retired in 1989.

**John T. Flynn, MD,** St. Louis, Missouri, died November 17, 1993, at age 85. Dr. Flynn received his medical degree from St. Louis University in 1934. He was in private practice for 55 years before retiring in 1987. Dr. Flynn was on staff at Incarnate Word Hospital since 1933. He was a member of the American Academy of Family Physicians.

■ **Ira C. Layton, MD,** Prairie Village, Kansas, died November 6, 1993, at age 75. Dr. Layton received his medical degree at Washington University in 1943. He specialized in internal medicine for 40 years before he retired. Dr. Layton formerly was past president of the medical staff at Research Medical Center. He was a member of the Phi Beta Pi medical fraternity. He was chairman of the board of the National Association of Blue Shield Plans from 1969 to 1973. Dr. Layton was a member of the American College of Chest Physicians and the American Society of Internal Medicine.

■ **Dean Alan Nierling, MD,** Columbia, Missouri, died November 9, 1993, at age 58. Dr. Nierling received his medical degree at the University of Iowa in 1960. From 1961 to 1963 he served in the U.S. Air Force as chief of the outpatient department at Warren Air Force Base, Cheyenne, Wyoming. He began a general and family practice in 1966 in Cresco, Iowa. From 1981 to 1982, he was an emergency physician at Medical Center Independence and the Keokuk Area Hospital. In 1982 he became a clinical instructor in emergency medicine at University Hospital and Clinics in Columbia, Missouri. Dr. Nierling had served on the board of directors at the American College of Emergency Physicians' Missouri Chapter since 1985 and was president of the chapter from 1989 to 1991. He was a member of the American College of Emergency Physicians, and the Missouri State and American Medical Associations.

# DISCIPLINARY ACTIONS

**The following is a listing of final disciplinary actions taken by the State Board of Registration for the Healing Arts. The listing includes actions finalized since the March 11-13, 1993 Board Meeting. This information is made available to the public under the provisions of Section 334.101 RSMo. Underlined names indicate member of the Missouri State Medical Association.**

**RAY SURAPANENI, DO,** Kirksville, Missouri
Personal impairment.
**Violation:** 334.100.2(1), (25), RSMo 1992
**Board Action:** License issued under 2 year probation with terms and conditions for personal impairment. Effective 8/28/93

**DAVID PITTENGER, DO,** Eureka, Missouri
Licensee prescribed controlled drug to a single patient for 9 years without documenting any diagnosis that would require drugs in the amount prescribed or for that time span.
**Violation:** 334.100.2(5), RSMo
**Board Action:** Issued Public Reprimand. Effective 8/12/93

**HAROLD A. HIRT, DO,** Tampa, Florida
Based on an action taken by the Florida Department of Professional Regulations "For failing to practice osteopathic medicine at a reasonable level of care in relation to the treatment of a patient in 1984."
**Violation:** 334.100.2(8), RSMo
**Board Action:** Issued Public Reprimand. Effective 8/10/93

**WILLIAM RAVENSCROFT, III, DO,** Salt Lake City, Utah
Disciplinary action taken in another state.
**Violation:** 334.100.2(4)(h)(5)(8) RSMo Supp. 1986
**Board Action:** Voluntary surrender of Missouri license with no reinstatement for seven (7) years. Effective 3/4/93

**ANTHONY G. POOLE, MD,** Sikeston, Missouri
Personal Impairment.
**Violation:** 334.100.2(5), (13), (25), RSMo 1989-1992
**Board Action:** License placed on 7 year probation with terms and conditions. Effective 8/4/93

**J. H. MORRIS, MD,** Independence, Missouri
From 1987 through 1990, licensee prescribed controlled substances in excessive amounts and for extended period of time to one patient, even though licensee knew the patient was addicted to the controlled substance.
**Violation:** 334.100.2(4)(h), (13)
**Board Action:** License placed on 3 year probation with terms and conditions. Effective 8/1/93

**CATHERINE MCCREDIE, PT,** Chesterfield, Missouri
Licensee provided service to patients that had not first been evaluated by a physician. The standard of service requires a patient to be evaluated by a physician before receiving physical therapy. Licensee engaged in the practice of medicine by evaluating and treating patients without a physician's order.
**Violation:** 334.100.2, RSMo Supp. 1992
**Board Action:** Licensee placed on 2 year probation with terms and conditions. Effective 8/12/93

**LANNY TURNER, MD,** East Peoria, Illinois
Personal Impairment.
**Violation:** 334.100.2(5), (13), (25), RSMo 1992
**Board Action:** Licensee was granted a Missouri license under 5 year probation with terms and conditions. Effective 8/1/93

**RICHARD SHEPARD, MD,** St. Louis, Missouri
Personal Impairment.
**Violation:** 334.100.(2), (4), (5), (25), RSMo 1992
**Board Action:** License placed on 1 year probation with terms and conditions. Effective 7/16/93

**MERRILL D. VANPATTEN, DO,** Sioux City, Iowa
Based on action taken by the Iowa Board of Medical Examiners, Licensee was convicted on 2 counts of fraudulent practice in the third degree, Iowa District Court, Woodbury County.
**Violation:** 334.100.2(2), (8), RSMo 1989-1991
**Board Action:** License suspended for 90 days. Effective 8/16/93

**GENE P. SMITH, DO,** Winfield, Missouri
Licensee prescribed Didrex for patients for weight control and did not complete a medical examination before dispensing prescription. Licensee did not keep a medical chart on patient

and also did not keep track of telephone refills.
**Violation:** 334.100.2(4)(h), (13), RSMo 1989 & 334.070.2, RSMo 1986
**Board Action:** Placed on 2 year probation with terms and conditions.
Effective 7/18/93

▮▮▮ **WEN Y. CHEN, MD,** East Alton, Illinois
Probation based on discipline imposed by Illinois Department of Professional Regulation.
**Violation:** 334.100.2(8), RSMo
**Board Action:** License placed on 5 month probation retroactive to Illinois time frame.
Effective 4/13/93

▮▮▮ **PEGGY B. TAYLOR, DO,** St. Louis, Missouri
Prescribed penicillin to patient to whom doctor should have known had a penicillin allergy.
**Violation:** 334.100.2(5), RSMo
**Board Action:** License placed on 5 year probation with terms and conditions.
Effective 6/2/93

▮▮▮ **JERRY L. NEMECEK, MD,** Boca Raton, Florida
Based on an action taken by the Florida Department of Professional Regulations. Discipline taken because the licensee practiced without an active Florida medical license.
**Violation:** 334.100.2(8), RSMo Supp. 1990
**Board Action:** Public Reprimand.
Effective 7/2/93

▮▮▮ **JAMES R. LOEB, MD,** Cincinnati, Ohio
Based on discipline taken by the State Medical Board of Ohio. In 1990 Licensee certified that he had the required number of CME credits. However, he could only document 28 CME hours.
**Violation:** 334.100.2(8), RSMo Supp. 1990
**Board Action:** License placed on 3 year probation with terms and conditions.
Effective 6/10/93

▮▮▮ **JAMES B. CHONG, MD,** Camilla, Georgia
Based on discipline take by the Ohio State Medical Board, licensee pled guilty to a misdemeanor involving moral turpitude.
**Violation:** 334.100.2(2), (4)(g), (5), (8), (14), RSMo Supp. 1990
**Board Action:** License revoked. May not reapply for 7 years. Effective 4/27/93

▮▮▮ **DONALD H. NELSON, DO,** Tucson, Arizona
Licensee was arrested for operating a motor vehicle while intoxicated on June 21, 1989 in Columbia, Missouri. He pled guilty to having ABH in excess of .10. He was arrested on July 21, 1990 and pled guilty to driving while intoxicated. This violated terms of a probation agreement that he signed with the Board on May 14, 1986.
**Violation:** 334.100.2(1), (4)(o), (25), RSMo Supp. 1989
**Board Action:** Surrender of medical license retroactive to 9/10/90.
Effective 9/10/90

▮▮▮ **ROBERT V. DELL, MD,** Hannibal, Missouri
Violated terms of probation agreement.
**Violation:** 334.100.2(1), (4)(o), (23), (25), RSMo Supp. 1991
**Board Action:** Placed on 7 year probation with terms and conditions. Effective 6/16/93

▮▮▮ **NEWTON D. NEUFELD, DO,** Mount Vernon, Missouri
Action based on discipline taken by the Texas Board of Medicine. Doctor surrendered his Texas medical license without admitting any violation of Texas administrative procedures.
**Violation:** 334.100.2(8), RSMo Supp. 1990
**Board Action:** Additional 2 years added to original probation agreement.
Effective 4/28/93

▮▮▮ **FATIMA L. LAQUINDANUM, PT,** Sikeston, Missouri
Made a false statement on examination application twice.
**Violation:** 334.100.2(3), RSMo
**Board Action:** Issued Public Reprimand.
Effective 5/25/93

▮▮▮ **AIMEE SAMONTE, PT,** Sikeston, Missouri
Made false statement on examination application twice.
**Violation:** 334.100.2(3), RSMo
**Board Action:** Issued Public Reprimand.
Effective 5/25/93

▮▮▮ **ALBERT J. GULESIAN, DO,** Lincoln, Maine
Action based on discipline taken by Maine Board of Osteopathic Examiners and Registration. The licensee was determined to be incompetent.
**Violation:**334.100.2(4)(o), (23), (25), RSMo Supp 1987-1992
**Board Action:** Surrender of license. No reapplication for 7 years. Effective 6/2/93

## NEW MEMBERS

❖ **Stephen E. Carney, MD,** 1012 N. Main, Sikeston, MO 63801, has become a member of the SEMO County Medical Society. Dr. Carney received his medical degree at the University of Arkansas in 1988. He completed his residency at AHEC, Pine Bluff, AR. Dr. Carney specializes in family medicine.

❖ **Joseph A. DeLucia, DO,** 1200 Kentucky Ave., West Plains, MO 65775, has become a member of the South Central Counties Medical Society. Dr. DeLucia received his doctor of osteopathy at the University of Health Sciences College of Osteopathic Medicine, Kansas City, MO. He completed his residency at Barnes Hospital. Dr. DeLucia specializes in anesthesiology and emergency medicine.

❖ **John J. Doyle, MD,** 2617 Cunningham, Suite B, Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Doyle received his medical degree at St. George's University, Grenada, in 1989. He completed his residency at Tampa General Hospital, Florida. Dr. Doyle specializes in anesthesiology.

❖ **Jon C. Gehrke, MD,** Div. of Orthopedics, M562, 1 Hospital Drive, Columbia, MO 65212, has become a member of the Boone County Medical Society. Dr. Gehrke received his medical degree at the University of Missouri-Columbia in 1983. He completed his residency at the University of Missouri-Columbia and fellowship at the Mayo Clinic, Scottsdale, AZ. Dr. Gehrke specializes in orthopedics.

❖ **Donald P. Hay, MD,** 1221 S. Grand Blvd., St. Louis, MO 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Hay received his medical degree at the State University of New York, Syracuse, NY, in 1970. He completed his residency at Upstate Medical Center. Dr. Hay specializes in psychiatry.

❖ **Poonam Jain, MD,** 6901 Chippewa, St. Louis, MO 63109, has become a member of the St. Louis Metropolitan Medical Society. Dr. Jain received his medical degree at the University of Iowa in 1988. He completed his residency at the University of Kentucky. Dr. Jain specializes in internal medicine.

❖ **Hugh L. Lacey, MD,** 1002 McIntosh Circle, Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Lacey received his medical degree at the University of Missouri-Columbia in 1978. He completed his residency at the Naval Hospital, San Diego. Dr. Lacey specializes in obstetrics and gynecology.

❖ **Deborah J. McCloud, MD,** 3401 McIntosh Circle Dr., Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. McCloud received her medical degree at West Virginia University in 1973. She completed her residency at West Virginia University Hospitals. Dr. McCloud specializes in dermatology.

❖ **Mitchell S. Meier, MD,** 1020 McIntosh Circle Dr., Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Meier received his medical degree at the University of Oklahoma in 1988. He completed his residency at the University of Kansas. Dr. Meier specializes in general surgery.

❖ **Alison H. Murray, MD,** 3635 Vista Ave. at Grand, St. Louis, MO 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Murray received her medical degree at the University of Kentucky in 1989. She completed her residency at St. Louis University. Dr. Murray specializes in anesthesiology.

❖ **Roy P. Neimark, MD,** 1718 S. Ingram, Sedalia, MO 65301, has become a member of the Pettis County Medical Society. Dr. Neimark received his medical degree at the Facolta di Medicina e Chirurgia dell'Universita di Bologna, Italy, in 1971. He completed his residency at Jewish Hospital Medical Center. Dr. Neimark specializes in obstetrics and gynecology.

❖ **Joseph A. Newman, MD,** 1727 W. 26th, Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Newman received his medical degree at the University of Texas Medical School, San Antonio in 1989. He completed his residency at Truman Medical Center West, Kansas City, MO. Dr. Newman specializes in general surgery.

❖ **John H. Niemeyer, MD,** 3009 N. Ballas Rd., St. Louis, MO 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Niemeyer received his medical degree at Washington University in 1982. He completed his residency at the Mallinckrodt Institute of Radiology. Dr. Niemeyer specializes in radiology.

❖ **Harvey D. Nitzky, MD,** 3009 N. Ballas Rd., St. Louis, MO 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Nitzky received his medical degree at the Facultad de Medicina Universidad Autonoma de Guadalajara, Mexico, in 1981. He completed his residency and fellowship at Suny Medical Center, Brooklyn, NY. Dr. Nitzky specializes in anesthesiology.

❖ **Lawrence V. Page, DO,** 32nd & Jackson, Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Page received his doctor of osteopathy at Midwestern University, Chicago College of Osteopathic Medicine in 1983. He completed his residency at the University of Washington Medical Center, Seattle. Dr. Page specializes in orthopedic surgery.

❖ **Jay F. Piccirillo, MD,** Box 8115, 517 S. Euclid Ave., St. Louis, MO 63011, has become a member of the St. Louis Metropolitan Medical Society. Dr. Piccirillo received his medical degree at the University of Vermont in 1985. He completed his residency at the Albany Medical Center, Albany, NY and fellowship at Yale University. Dr. Piccirillo specializes in otolaryngology.

❖ **Karen L. Porte, MD,** 3302 McIntosh Circle, Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Porte received her medical degree at Loyola University Stritch School of Medicine in 1981. She completed her residency and fellowship at Loyola Medical Center. Dr. Porte specializes in endocrinology.

❖ **Sharon E. Prohaska, MD,** 1010 Carondelet Dr., #112, Kansas City, MO 64114, has become a member of the Missouri State Medical Association. Dr. Prohaska received her medical degree at the University of Kansas in 1979. She completed her residency at the University of Kansas Medical Center. Dr. Prohaska specializes in internal medicine.

❖ **Gordon H. Robinson, MD,** 621 S. New Ballas Rd., Suite 682, St. Louis, MO 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Robinson received his medical degree at Washington University in 1986. He completed his residency at Barnes Hospital. Dr. Robinson specializes in psychiatry.

❖ **Guy R. Russell, MD,** 2914 E. 32nd, Suite 116, Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Russell received his medical degree at the University of Pittsburgh in 1964. He completed his residency at the University of California-San Diego. Dr. Russell specializes in psychiatry.

❖ **Robert C. Stauffer, MD,** 2817 McClelland Blvd., Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Stauffer received his medical degree at Indiana University in 1987. He completed his residency at Kaiser Hospital, Los Angeles. Dr. Stauffer specializes in cardiology.

❖ **John R. Trost, MD,** 10 Doctors' Park, Cape Girardeau, MO 63701, has become a member of the Cape Girardeau Area County Medical Society. Dr. Trost received his medical degree at Southern Illinois University in 1988. He completed his residency at Blodgett Memorial Hospital, Grand Rapids, MI. Dr. Trost specializes in general and vascular surgery.

❖ **Michael L. Turner, MD,** 2400 Lucy Lee Parkway, Poplar Bluff, MO 63901, has become a member of the Butler-Wayne-Ripley-Carter County Medical Society. Dr. Turner received his medical degree at the University of Missouri-Columbia in 1971. He completed his residency at Akron City Hospital, Akron, OH. Dr. Turner specializes in orthopedics.

❖ **Karl T. Weber, MD,** IM/CD MA432, #1 Hospital Drive, Columbia, MO 65212, has become a member of the Boone County Medical Society. Dr. Weber received his medical degree at Temple University in 1968. He completed his residency and fellowship at the University of Alabama, Birmingham. Dr. Weber specializes in internal medicine.

## RESIDENTS

John C. Burchfield, MD - *Ophthalmology*
Sally A. Fortner, MD - *Pediatrics*
David W. Koh, MD - *Internal Medicine*

## STUDENTS

*University of Missouri-Kansas City*

Shelly K. Khurana
Christine A. Pierce
Deepa Shah
Divya Shroff

# CME CALENDAR

**The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send CME information for listing in *MISSOURI MEDICINE*. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.**

## January

**10 - *St. Louis*: City-Wide Radiology Conference, St. Louis University.** Contact R. Gilbert Jost, MD, Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis, MO 63110, 314/362-7130.

**14 - *Springfield*: Pediatric Advanced Life Support Recertification Course.** 7 credit hours. Call 417/885-4117.

**18 - *Kansas City*: Perinatal Core Curriculum Workshop #1.** 5 credit hours. Contact Carol Osborne, St. Luke's Hospital of K.C., 816/932-3737, fax - 816/932-5119.

**24 to 26 - *Orlando, FL*: 14th Annual Conference on Peritoneal Dialysis.** Contact Barry Kling, University of Missouri-Columbia, 314/882-4105.

**24 to 28 - *St. Louis*: The Medicolegal Death Investigator Training Course.** 33 credit hours. Contact Mary Fran Ernst, 314/522-6410, ext. 6509.

## February

**1 - *Kansas City*: Perinatal Core Curriculum Workshop #2.** 5 credit hours. Contact Carol Osborne, St. Luke's Hospital of K.C., 816/932-3737, fax - 816/932-5119.

**1 to 5 - *San Diego, CA*: 19th Annual Meeting of the Alliance for CME.** 13.5 credit hours. Contact Daniel E. Reichard, George Washington University, CME, 202/994-4285, fax 202/994-1791.

**4 - *Kansas City*: Neuromuscular Disorders.** 6 credit hours. Contact The Ed Bixby Institute for Postgraduate Medical Education, (816)276-4306, toll free in Missouri - (800)892-5771, Ext. 4306, bordering states - (800)821-5140, Ext. 4306.

**14 - *St. Louis*: 8th Annual Daniel R. Biello Memorial Lecture: Henry D. Royal, MD - Pulmonary Embolism: Scientific Challenges.** Contact R. Gilbert Jost, MD, Mallinckrodt Institute of Radiology, 314/362-7130.

**15 - *Kansas City*: Perinatal Core Curriculum Workshop #3.** 5 credit hours. Contact Carol Osborne, St. Luke's Hospital of K.C., 816/932-3737, fax - 816/932-5119.

**26 to March 5 - *Barbados*: Topics in Gastroenterology and Internal Medicine.** 15 credit hours. Contact Maria Gorrick, George Washington University, CME, 202/994-4285, fax 202/994-1791.

## March

**1 - *Kansas City*: Perinatal Core Curriculum Workshop #4.** 5 credit hours. Contact Carol Osborne, St. Luke's Hospital of K.C., 816/932-3737, fax - 816/932-5119.

**4 & 5 - *St. Louis*: The Annual Meeting of the Midwest Gut Club.** Contact the St. Louis University, CME, 314/577-8167 or 800/553-2712.

**6 to 11 - *Vail, CO*: Update in Clinical Medicine.** 19 credit hours. Contact Steven Smith, George Washington University, CME, 202/994-4285, fax 202/994-1791.

**9 - *St. Louis*: Updates in Gastroenterology.** 4 credit hours. Contact St. John's Mercy Medical Center, 314/569-6290.

**10 & 11 - *St. Louis*: Gastrointestinal Surgery: Refresher Course and Update.** Contact CME, Washington University, 314/362-6893 in MO or 800/325-9862 interstate.

**14 - *St. Louis*: City-Wide Radiology Conference: Theresa McLoud, MD - Computed Tomography of the Pulmonary Parenchyma.** Contact R. Gilbert Jost, MD, Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis, MO 63110, 314/362-7130.

**15 - *Kansas City*: Perinatal Core Curriculum Workshop #5.** 5 credit hours. Contact Carol Osborne, St. Luke's Hospital of K.C., 816/932-3737, fax - 816/932-5119.

**17 to 19 - *St. Louis*: Microsurgery of the Temporomandibular Joints.** 20 credit hours. Contact the St. Louis University, CME, 314/577-8167 or 800/553-2712.

**18 - *St. Louis*: Laboratory Monitoring of Antithrombotic Therapy.** 7 credit hours. Contact the St. Louis University, CME, 314/577-8167 or 800/553-2712.

**18 - *Washington D.C.*: Ultrasound in Abdominal Surgery.** Contact Maria Gorrick, George Washington University, CME, 202/994-4285, fax 202/994-1791.

**24 - *St. Louis*: Neonatal Pharmacology.** 6.75 credit hours. Contact Patricia Nash, St. Louis University, 314/577-5631.

**25 & 26 - *Springfield*: Pediatric Advanced Life Support Provider Course.** 16 credit hours. Call 417/885-4117.

**30 - *St. Louis*: Updates in Ophthalmology for the Non-Ophthalmologist.** 4 credit hours. Contact St. John's Mercy Medical Center, 314/569-6290.

## April

**7 - 10 - *Kansas City*: The 136th Annual Convention of the Missouri State Medical Association.** Scientific sessions covering over 20 specialities. Call MSMA for more information, 314/636-5151.

**9 & 10 - *Chicago, IL*: National Kidney Foundation Third Annual Spring Clinical Nephrology Meetings, Primary Care Nephrology Program.** 10 credit hours. For information call 1-800-622-9010.

**9 to 11 - *Washington D.C.*: Workshop on Stress Echocardiography.** 13 credit hours. Contact Beth M. Paul, St. Luke's Hospital of K.C., 816/932-2301, fax 816/932-5119.

**11 - *St. Louis*: City-Wide Radiology Conference, St. Louis University.** Contact R. Gilbert Jost, MD, Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis, MO 63110, 314/362-7130.

**19 - *Kansas City*: Perinatal Core Curriculum Workshop #7.** 5 credit hours. Contact Carol Osborne, St. Luke's Hospital of K.C., 816/932-3737, fax - 816/932-5119.

**21 & 22 - *St. Louis*: Symposium on Obstetrics & Gynecology.** Contact Washington University, CME, 314/362-6893 in MO, 800/325-9862 interstate.

**21 to 24 - *St. Louis*: Advanced Microsurgery of the Lumbar and Cervical Spine.** 28 credit hours. Contact the St. Louis University, CME, 314/577-8167 or 800/553-2712.

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1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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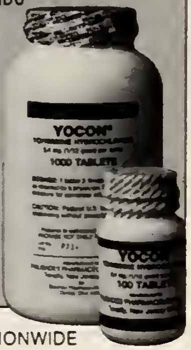

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Journal of the Missouri State Medical Association
February 1994

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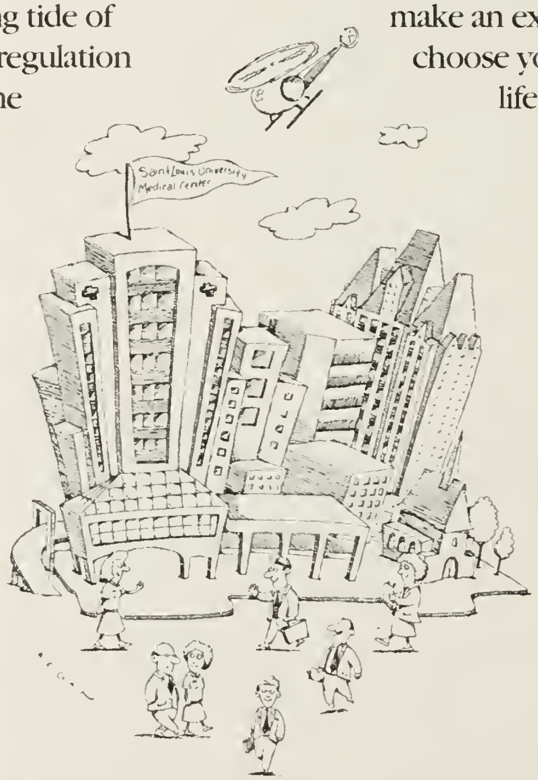
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# Health Care Reform, Easier?

J. Regan Thomas, MD, Editor

As I continued to explore possible implications of the proposed Clinton Health Plan, I came across some interesting information regarding the possible administration of that plan. Realize of course that some or all of this may change in the months to come. At this point however, here are the new "committees" that would be suggested to administer the proposal:

1. **National Health Board**
    - A seven member board of full time employees in addition to an executive staff and director.
    - The board will enter into contracts to develop implementation of standardization of medical records, insurance reimbursement, and establish plans for automation of insurance transactions, and streamline the Medicare program.
    - Work with sub groups to develop and identify standards in health care.
    - Appoints an Advisory Commission to recommend adjustments.
    - Committees of the National Health Board:
        a. Board to manage performance based system for quality management (advisory council of 15 members under National Health Board appointed by the President)
        b. National Health Information System
        c. Drug breakthrough committee
2. **Office of Management and Budget**
    - Would review the National Health Board's budget.
3. **General Accounting Office**
    - Conducts periodic audits of the National Health Board.
4. **National Advisory Board on Risk Adjustment System**
    - An advisory panel of 15 members representing health plan alliances, consumers, and health care providers.
5. **Commission on Health Benefit and Integration**
    - Would explore feasibility and appropriateness of transferring financial responsibility of all medical documents (including workmen's compensation and automobile insurance) to the new health reform system.
6. **National Information Infrastructure Board**
    - Coordinates and establishes policies for data collection.
7. **National Health Data Advisory Council**
    - Is established.
8. **National Advisor Council**
    - Oversees information and data activities including setting parameters regarding privacy and federal government issues under health care reform.
9. **National Council on Graduate Medical Education**
    - Includes medical educators, physicians, consumers, health administrators, nurses.
    - Determines the number of physicians in training in each residency program and allocates them.
10. **Medical Treatment Effectiveness Program**
    - Funds patient outcome research teams (ports) with 5 year grants to do outcomes research and develop parameters for grants.
11. **All-Payer Health Care Fraud Anti-Abuse Enforcement Program**
    - Coordinates federal, state and local enforcement activities in health care fraud and abuse. The Program would be jointly directed by the Justice Dept. and HHS.
12. **Federal, State, Alliance and Health Plan Data Network**

There would also be expansion of a number of existing federal agencies to accommodate the Proposals including HHS and Labor departments. Likewise, expanded activities would also be expected by the National Health Service Corporation, the Public Health Service, and HCFA.

Finally, there would be creation of state and regional committees to coordinate the federal activities at the state and regional level. For example, each state would develop an entity to assume control of any failed health plan in that state. Also each state would designate an agency to administer expanded home and community-based services and benefits.

This of course is just an overview. How these proposals will actually end up is certainly speculation. At this point I'm only sure of one thing. While there is no way to know if Health Care will be better, it is obvious it will not be simpler. ■

# Guidelines Could Smooth Implementation of Collaborative Practice Arrangements

Melvin C. Kasten, MD, MSMA President

One key provision included in the Omnibus Health Care Bill (House Bill 564) adopted by the Missouri General Assembly last May officially recognizes the ability of physicians and registered nurses to enter into "collaborative practice" arrangements. The provision should encourage increased access to health care for patients in underserved areas, but the arrangements are not limited to such areas and can be established in any practice setting. The "collaborative practice" measure was adopted in lieu of efforts to legalize the independent practice of nursing in the state.

Physicians may enter into collaborative practice arrangements with either RNs or Advanced Practice Nurses (APNs) Although an APN can prescribe non-controlled substances while an RN cannot, both classes of nurses can only provide services within the scope of their practice and consistent with their skill, training and competence.

Due to some confusion which has arisen over this subject, the MSMA Council appointed an AD Hoc Committee on Collaborative Practice to study the issue and develop suggested guidelines for physicians to take into account when considering a collaborative practice arrangement. The Committee's report and guidelines subsequently were adopted by the MSMA Council with the caveat that the information be provided to MSMA members for their consideration.

**Suggested Collaborative Practice Guidelines:**

1. The supervising physician bears the authority and the responsibility for the delegated acts. Accordingly, the tasks delegated to the nurse should be within the scope of those provided by the physician.
2. Physician supervision means that nurses (or advanced practice nurses) only perform acts and procedures that have been specifically authorized and directed by the supervising physician.
3. The physician is ethically and legally responsible to ensure that all delegated activities are within the nurse's scope of practice.
4. The supervising physician must have the opportunity to exercise oversight, direction and control of the services of the nurse. Therefore, it is the responsibility of the supervising physician to direct and review the work, records and practice of the nurse on continuing basis to ensure that appropriate directions are given and understood and that appropriate treatment is rendered.
5. The physician must provide direction to the nurse in order to specify what medical service should be provided for all types of cases that the nurse is expected to see. These directions may take the form of written protocols, oral communication, in person, by telephone or by other means of electronic communication.
6. Protocols developed by the supervising physician and the nurse should include guidelines describing and delineating the nurse's functions and responsibilities. Protocols should be as specific in their guidance as the physician and nurse require for their particular practice.
7. Although it is not possible to cover all clinical situation in written protocols, there must be an understanding between the physician and nurse regarding the actions the nurse may undertake in all commonly encountered clinical situations and, especially, under what circumstances physician consultation is to be immediately obtained.
8. The development of appropriate written or oral protocols requires an initial period during which the nurse works under the close supervision of the physician. The degree of supervision should lessen only when the physician can ensure that the nurse can provide care in accordance with directions and accepted medical standards.
9. The physician and nurse must regularly review protocols to ensure they are current in regard to the physician's scope of practice, the range of tasks delegated by the physician, and evolving standards of medical practice.

10. Immediate physician consultation must be indicated for specified clinical situations and in situations falling outside those specified in written or oral protocols.
11. A physician should not enter into a collaborative practice with more than two nurses.
12. The supervising physician must review the quality of medical services rendered by the nurse regularly by reviewing medical records to ensure compliance with directions and standard of care. The physician must review a sufficient sample of nurse-written medical records with sufficient frequency to ensure compliance with the physician's directions and to protect patient welfare.
13. If the nurse orders treatment outside established parameters without the supervising physician seeing the patient, the supervising physician should personally review the case as soon as possible.
14. A nurse should not provide health care services during periods of time when the supervising physician is unavailable unless an alternate supervising physician has been designated.
15. A supervising physician should regularly visit an off-site location where the nurse is providing health care services.
16. Generally, utilization of a nurse off-site involves a supervising physician-nurse team that has had sufficient opportunity to establish a close working relationship prior to deploying the nurse to the site. The supervising physician must be available in person or by electronic communication when the nurse is caring for patients.
17. When off-site supervising is provided, the physician and nurse must establish that the lack of onsite supervision is reasonable under the circumstances. The supervising physician and nurse must ensure that distance does not become an impediment to regular and adequate review of the nurse's work.
18. When off-site care is provided, transportation and backup procedures for immediate handling of patients needing emergency care and care beyond the nurse's scope of practice should be established.

These MSMA guidelines are separate and independent from current efforts by a Joint Committee of the Board of Healing Arts and the Board of Nursing to develop regulations to further implement the language in House Bill 564. Your thoughts on the suggested guidelines are welcome. Write to me at the Association office in Jefferson City (PO Box 1028, 113 Madison St, 65102). ■

# American Medical Women's Association

## Carol Williams, MD Community Service Award

Carol F. Williams, MD was awarded the community service award for Missouri at the American Medical Women's Association in New York City last November. She received the award for her continued efforts to promote health care for the indigent. Dr. Williams has served as president of the St. Louis Metropolitan Medical Society and is Immediate Past President of MSMA. During her term, she gave up her lucrative private practice to work at the Carondelet Health Center in South St. Louis City to practice what she preaches and treat indigent women. Dr. Williams also has volunteered time as the newest member of the Board of Healing Arts of Missouri.

## Jo-Ellyn Ryall, MD First Speaker of the AMWA House of Delegates

Jo-Ellyn M. Ryall, MD, has been elected First Speaker of the House of Delegates of the American Medical Women's Association. The office was newly created by bylaws changes in 1992. Dr. Ryall has previously been Vice-Speaker and Speaker of the House of Delegates of the Missouri State Medical Association and also President of the Eastern Missouri Psychiatric Society.

POETRY

# Autobiography of the Prostate: An Untold Story

by S.D. Madduri, MD, *Poplar Bluff, MO*

In the deep depths of the pelvis
In the dark alleys of the retropubic space
Guarding the bladder neck in sickness and in health
I am the *prostate*, the walnut shaped gland
Intended for a noble and worthy task
Provide medium and nutrition for the sperm
In its ultimate quest to meet the ovary
A job well done from times immemorial

As the man fades into his golden years
And his hormonal milieu goes down the hill
I gain weight and swell up large and ugly
Only to shut off the bladder outlet
And cause my host problems innumerable
Frequency, urgency, hesitancy
Nocturia, retention and infection to name a few

Urologists invented ways and means
To trim my unwanted fat
And make the channel open and wide
For the water to flow free and unimpeded

I was named the "Bread and Butter" of
Those human plumbing machines
But them *Damn Docs* have gone too far
They are trying to burn me with *Lasers*
Cook me with *Microwaves*
*Freeze* my buns with temperatures low and frigid
Techniques sophisticated and expensive
That can send chills through Hillary and Bill's spine

A word of caution to all those guys
You don't kill the goose
That lays golden eggs
You don't fool Mother Nature
The last laugh could be mine

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# Ophthalmology Quiz #2

John C. Hagan, III, MD

A 29-year-old woman complained of painless, blurred vision in her right eye that has progressively worsened over one week. She has no complaints about her left eye. She does not wear glasses and had a normal eye examination by an Ophthalmologist three months ago. She is in apparent excellent health and takes oral contraceptives. She does not smoke. Her vision in the right eye is hand movements and 20/20 in the left eye. Her right retina is shown in figure 1.

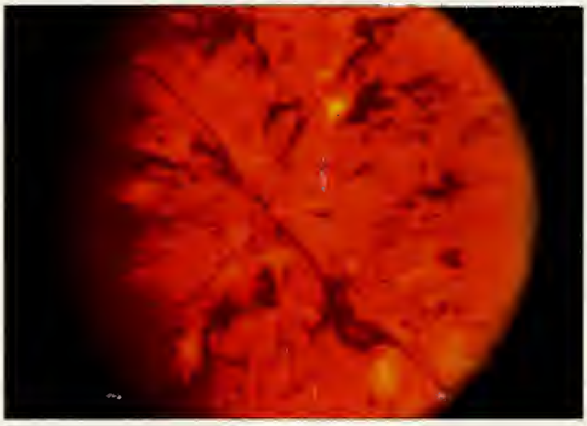

Figure 1

**1. Which is the correct diagnosis for the retina shown in figure 1?**

**a. Central retinal artery occlusion**
**b. Central retinal artery emboli**
**c. Central retinal vein occlusion**
**d. Severe, non-proliferative diabetic retinopathy**

**(See answer on next page.)**

The Ophthalmology Quiz is produced and coordinated by John C. Hagan III, MD, Director, Midwest Eye Institute of Kansas City, Inc., North Kansas City, Missouri. Financial support for this feature is provided by ALCON SURGICAL IOPTEX , Inc., North Kansas City Hospital, Missouri Ophthalmological Society, Inc., CHIRON, Inc., MERCK & CO. INC., and O. H. Gerry Optical Co.

# OPHTHALMOLOGY QUIZ ANSWER

**(Ophthalmology Question is on previous page.)**

Answer: c. Central retinal vein occlusion.

Central retinal vein occlusion (CRVO) is usually seen in older adults and is often associated with systemic vascular disease. CRVO can occur in young adults and is occasionally associated with systemic disease (Table 1). Any identified systemic condition should be appropriately treated. However in the majority of cases CRVO occurs in an otherwise healthy patient with no systemic disease or ocular problem. Inflammation of the central retinal vein has been proposed as a cause of the occlusion in young adults and for that reason the condition has also been called papillophlebitis. The typical retinal appearance is of unilateral optic disc edema, dilation and tortuosity of the retinal veins with a variable amount of retinal hemorrhage. An approach to the diagnostic evaluation of the young adult with CRVO is presented in Table 2. Most eyes recover vision to better than 20/40 but about 20% have significant, permanent visual loss. Many treatment modalities have been tried for this entity including oral steroids, anticoagulation, Diamox, photocoagulation and vitrectomy. No conclusive evidence exists that any treatment alters the natural history of CRVO.[1]

*References*

1. Fong AC, Schatz H: Central retinal vein occlusion in young adults. *Surv Ophthalmol* 37:393-417, 1993.

**TABLE 1 - Medical Conditions Known to be Associated with CRVO**

- Systemic Hypertension
- AIDS
- Diabetes
- Pregnancy
- Hyperlipidemia
- Preeclampsia
- Platelet abnormalities
- Oral contraceptives
- Hyperviscosity
- Sympathomimetics
- Cryofibrinogenemia
- Diuretics
- Lupus erythematosus
- Mitral valve prolapse
- Systemic vasculitis
- Renal disease
- Sarcoidosis
- Carotid disease
- Tuberculosis
- Leukemia
- Malignancy
- Blood dyscrasia
- Reye's syndrome
- Head injury

**TABLE 2 - Work-up of CRVO in Young Adults**

*Basic Evaluation*

- *History
  - Age
  - Sex
  - Race
  - Medical conditions
    - *Hypertension
    - *Diabetes mellitus
    - *Hyperlipidemia
    - Coagulopathy
    - Migraine
    - Mitral valve prolapse/cardiac problems
    - Collagen vascular disease
    - *Acquired immunodeficiency syndrome
    - Carotid artery disease
  - Medications
    - *Contraceptives/hormone therapy
    - Diuretics
    - Sympathomimetics
  - Ocular conditions
    - *Glaucoma
    - Optic nerve disease
  - Previous vascular occlusions
  - Other
- *Ocular examination
  - Symptoms
  - Refractive error
  - Visual acuity
  - Pupillary examination
  - Funduscopic examination
  - Fluorescein angiography
  - Visual field examination
  - *Intraocular pressure
- General physical
  - Carotid (bruit)
  - Heart (murmur)
  - *Blood pressure
- Laboratory
  - *Fasting blood sugar
  - *Lipid profile
  - *Complete blood count with platelet (CBC)
  - *Human immunodeficiency virus
  - Syphilis serology
  - Erythrocyte sedimentation rate (ESR)

*Secondary Evaluation (as indicated)*

- History (see Table 1)
- Ocular examination
  - Diurnal pressure curve
  - Electrophysiology
- Physical examination
  - Additional testing as indicated from general physical
- Laboratory
  - Coagulation studies
  - Neuro-imaging
  - Chest X-ray
  - Anti-nuclear antibodies
  - Rheumatoid factor
  - Skin testing for anergy and tuberculosis
  - Angiotensin converting enzyme/lysozyme
  - Uric acid
  - Anticardiolipin
  - Lupus anticoagulant
  - Carotid Doppler
  - Echocardiogram
  - Creatinine
  - Cryofibrinogen
  - Blood viscosity
  - Pregnancy test

*Denotes necessary components of work-up.

# Of Times Ahead

Catherine Stocklin - Washington University Medical Student

> *"Medicine, like all knowledge, has a past as well as a present and a future, and ... in that past is the indispensable soil out of which improvement must grow."*
>
> **Alfred Stille, 1984**

Health care reform dominates the attention of both the media and public. While few debate the need for reform, there are widely varying opinions on how the changes should be implemented. Personally, as a non-member of Congress, I know my influence on the folks actually writing the bill is somewhere between tiny and null (more like null). As I sit twiddling my thumbs, I start to wonder about issues that perhaps are more relevant to myself. What are they going to want of me? Will they make the right decisions? And perhaps most importantly, how will I respond to them?

These types of questions, I realize, are not unique to myself or even to this problem. The forces of society now molding medicine have, in varying forms, always been present. As a result, we in medicine have a long and colorful history of adjustment and often growth in response to these pressures. Hopefully, we can recognize the similarities of historic problems to modern ones and draw on these examples to better cope with our own challenges. Let us now turn to a few examples.

One pressure that has arisen fairly consistently, resurfacing in various forms, has been that of restriction. While the politicians on television discuss state monitoring of physician activities and, on the other hand, the physician describes a need for freedom, my mind turns to one of the greatest figures in the history of medicine, Galen of Pergamum. Galen made tremendous advances in the knowledge of muscles, bones, and physiology. His work, recognized as the standard for hundreds of years and still recognized for its genius, was accomplished without the dissection of a single human cadaver or breaking with the religious beliefs of his time or even fully severing ties with the more ancient beliefs established in Hippocratic times. Had he broken with the norms of his era, his name perhaps would have achieved far less acceptance and been lost to our own time. So, here is at least one man who prospered under the stringent controls of his day.

We also grapple with the nature of our ties to government. Again, the topic is ancient. Many of the pillars in medicine have, in fact, been closely linked to the rulers as court physicians (or at least provided services to royalties). The long list of such notables includes Democedes, an imminent ancient Greek physician; Andreas Vesalius, the father of modern anatomy (a copy of whose beautiful work *De Humani Corporis Fabrica* is in the Washington University Medical Library and available for your viewing); Galen, who I've already mentioned; the great surgeon Ambroise Pare, who reintroduced the ligature and wrote extensively; and many, many others. There is also, then, a history of a close marriage between physicians and government.

The role of academic institutes is yet another old problem being newly debated. This is seen, for example, in the problem of how to increase the number of family care residency slots without sacrificing more specialized (and research-intensive) areas. The role of academics in medicine, especially in the last several hundred years, has been as the crucial source of brilliant minds and new ideas. Virtually every major technical development since the 1700's has been in association with some institute or another, with few exceptions (most notably, the development of the smallpox vaccine by William Jenner).

Even though we may or may not agree with the changes occurring around us, we must nevertheless learn to successfully work within the framework they provide. Fortunately, we are not isolated in our struggles, but are rather involved with a relationship that has been developing as long as the history of medicine itself. We can therefore turn to these past experiences for guidance, just as we do technically in our work every day. Our medical forbearers looked to their own futures with a vision that manifested in many great successes; why should we be any different? It is, then, with the experience of our past behind us, understanding of our problems today, and a vision for tomorrow that we know in addition to the great times behind us, there are also great times ahead.

Ackerknecht, *A Short History of Medicine.* Baltimore, MD: John Hopkins Press, 1982.

Magner, L.N. *A History of Medicine.* New York: Marcel Dekker, 1992.

# Black-White Disparities in Health Status in Missouri

Garland Land, MPH, Bruce Gibson, BS and Wayne Schramm, MS

**Historically, the overall health status as measured by life expectancy and infant mortality of Black and White Missourians has been significantly different. We analyzed birth, death, child death and communicable disease data to determine if Blacks have narrowed the gap in health status. The overall health status of Black and White Missourians improved over the last two decades. However, the gap in health status still remains, and in some cases, has gotten worse. This occurred despite the increase in health care financing through Medicare and Medicaid. To narrow the gap in health status between Blacks and Whites requires addressing prevention and the social problems along with the medical problems.**

## INTRODUCTION

In 1911, Missouri deaths were first registered with the state. The leading causes of death for Missourians at that time were tuberculosis, diseases of the circulatory system, pneumonia and influenza, and diarrhea.[1] The life expectancy at birth in 1911 was 53.0 years.[2] Over 80 years later, the leading causes of death in 1992 were heart disease, cancer, stroke, and chronic pulmonary disease.[3] Persons born in Missouri in 1992 can expect to live on the average 75.5 years.[3]

Great strides have been made in improving the health status of Missourians. Many of the leading killers of the past have been brought under control. Whereas communicable and infectious diseases represented 23.6% of deaths in 1911, they represented only 2.1% in 1992.[1,3] Much of the change can be credited to improved sanitary conditions, improved nutrition, antibiotics and immunizations. The increase in life expectancy by 22.5 years is indeed a remarkable achievement.

The improvements in Missourians' health status parallel the improvements that have occurred throughout the United States. But while there have been significant improvements for the US population as a whole, minorities do not share the same health status as White Americans. The *Report of the Secretary's Task Force on Black & Minority Health*[4] noted over a decade ago there were nearly 59,000 annual excess minority deaths nationwide.

The purpose of this article is to document the current health status of the Black population in Missouri in comparison with the White population and to compare health status changes over time.

## METHODS

The World Health Organization defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."[5] Unfortunately, there is no recognized operational criteria to measure health according to the WHO definition. Instead it is common to measure ill health as a proxy to understanding health status. For this article, health status is measured by life expectancy, infant mortality, maternal health factors, deaths due to chronic diseases, deaths due to injuries, and infectious disease cases.

Four sources of data are used: death records, birth records, communicable disease reports and child fatality reports. All births and deaths are required by statute to be reported to the Missouri Department of Health (DOH). The birth records are usually completed by the hospital personnel and the physician attending the birth. Virtually all births are reported. Demographic information on the death certificate is acquired by the funeral director and the cause of death is completed by a physician or coroner. The underlying cause of death is determined and coded by the DOH according to the International Classification of Diseases Adapted (ICDA).[6] Again, virtually all deaths are reported to the Department of Health.

Eight chronic diseases deaths were selected for analysis because they show at least one of the following: 1) a large impact on the population; 2) potential for prevention; and 3) the greatest differential in mortality between the races. Death rates were age-adjusted using the direct method and the 1940 US population as the standard population.[7]

The maltreatment data are obtained through a reporting system of the child fatality review panels established by Chapter 210.192 RsMo. Every suspicious child death 0-14 years of age is reviewed by a county multidisciplinary team to determine the factors surrounding the death. The findings of the local review panel are sent to the DOH. More specific information is collected on all children's deaths in this age group. This is considered a more accurate and complete source of data on child maltreatment fatalities than death certificates or other administrative data systems.[8]

The US Bureau of the Census provides population counts by race every decade and these were used for the calculation of the race specific rates. The analysis was developed around the 1970, 1980 and 1990 censal periods because the cause and race specific data were most readily available for these time periods.

This paper only compares health status indicators for Whites compared with Blacks. The other minority groups represent very small numbers, reporting is irregular, and the rates are very unstable unless many years are aggregated. Computing rates for Hispanics is also problematic because health data have not been routinely collected in the past by Hispanic origin.

Up until 1971, vital statistics data in Missouri were coded as White and non White so the Black rates are not available. The Black rate for most health indicators is generally worse than a nonWhite rate. To have comparable trend data an estimate of the Black rate is shown for some indicators. Before 1972, for maternal child health indicators, race of mother was used instead of race of child. For rates around 1970, an adjustment was also made to take this into account.

## RESULTS

In 1990 Missouri had a population of 5,117,073 persons. 4,486,228 were classified as White and 630,845 (12.3%) were counted as Black or other races. There are 548,208 Blacks living in Missouri or 10.7% of the total population. Other minority groups include 41,277 Asians (.8%) and 41,360 (.8%) other non White races. The 61,702 Hispanic persons, who can be of any race, comprise 1.2% of the population. Blacks represent 87% of the Missouri minority community.

Historically, Black Missourians have had poorer overall health status than Whites. As shown in Figure 1, the life expectancy for Whites in 1950 was 69.4 years or 12.3 years longer than Blacks.[2] Both Blacks and Whites have seen an improvement in life expectancy in the past forty years. The difference in Black and White life expectancy decreased substantially from 1950 to 1960 to 8.8 years. The gap decreased a year to 7.8. Since 1970 there has been relatively little improvement in narrowing the life expectancy gap between the races. The difference was 6.5 in 1980 and 7.1 in 1980.

Another common measure of the health status of a population is the infant death rate. The 1988-1992 Black infant death rate was 18.0 infant deaths per 1000 live births or 2.2 times the White rate of 8.0.[3] The

Continued on page 68

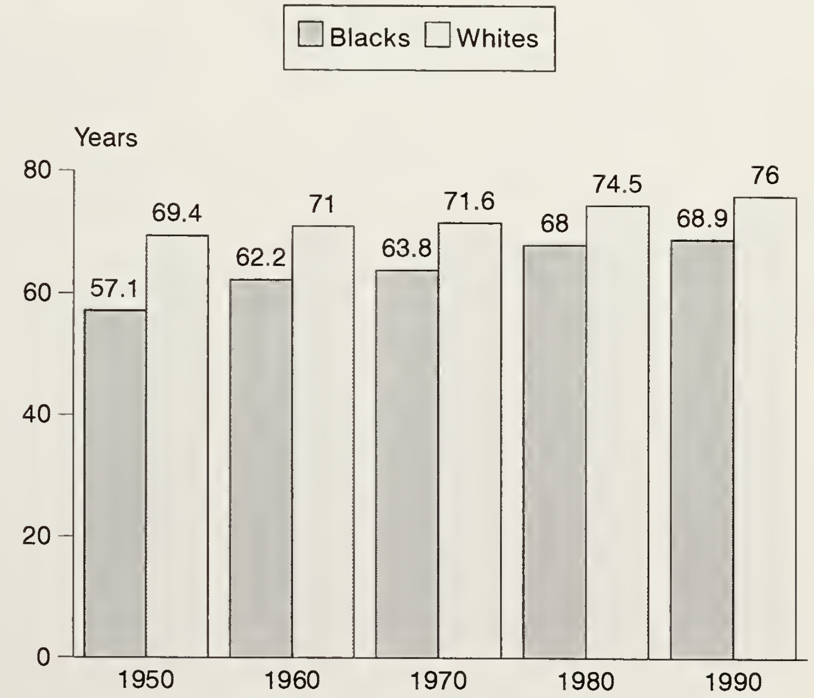

**Figure 1. Life Expectancy by Race, Missouri 1950-1990.**

**Table 1. Relative Risk of Black to White Age Adjusted Death Rates by Selected Causes, Missouri, 1968-72, 1978-82, 1988-92**

| Cause | 1968-72[1] | 1978-82 | 1988-92 |
|---|---|---|---|
| All Causes | 1.6 | 1.5 | 1.6[2] |
| Chronic Diseases | | | |
| Cerebrovascular Disease | 1.8 | 1.5 | 1.7[2] |
| Cervical Cancer | 3.1 | 2.9 | 2.4 |
| Diabetes | 2.2 | 2.1 | 2.5[2] |
| Hypertension | 3.4 | 3.2 | 3.8 |
| Liver Diseases and Cirrhosis | 2.6 | 2.2 | 1.9[3] |
| Lung Cancer | 1.3 | 1.4 | 1.4[3] |
| Nephritis-Nephrosis | 3.8 | 3.2 | 2.5[3] |
| Prostate Cancer | 2.0 | 2.3 | 2.3[3] |
| Injuries | | | |
| All Injuries | 2.1 | 2.0 | 1.9[3] |
| Unintentional Injuries | 1.2 | 1.1 | 1.1 |
| Homicides | 14.5 | 12.1 | 13.0[3] |

[1] Relative risk for Blacks estimated from non-white relative risk.

[2] 1978-82 relative risk significantly different from 1968-72 relative risk.

[3] 1988-92 relative risk significantly different from 1968-72 relative risk.

Continued from page 67

relative risk was 2.0 for the 1968-1972 time period and remained at that approximate level until the late 80s. The Black infant death rate of 1992 is comparable to the rate experienced by Whites in the early 70s resulting in a lag of about 20 years.

One of the factors contributing to infant mortality is the inadequacy of prenatal care. To have comparable data over three decades inadequacy of prenatal care was measured from the birth certificate as care not beginning in the first trimester of pregnancy. The relative risk for inadequate prenatal care improved somewhat from the 1968-72 to 1978-82 (2.3 to 1.7) however, a decade later it had increased nearly back to the 1968-72 level. In 1988-92, 37.6% of Black women had inadequate prenatal care compared with 17.4% for Whites for a relative risk of 2.2.

Women who live in poverty and do not have health insurance have more health complications of pregnancy and childbirth.[9] Black women and children are disproportionately represented among the poverty ranks. Twenty-nine percent of Black Missourians were below the 1990 poverty line compared with 11.2% of Whites.[10] Children that live in a single parent household are 3.7 times more likely to live in poverty and 60.9% of Missouri Black children live in a single parent household.[10]

In 1988-92 76% of Black children were born to a mother who was not married. This compares with 19% for White children. Black unmarried mothers increased from 49% in 1968-72 to 65% in 1978-82. While the White percentage of children born to unmarried mothers is considerably less than the Black percent, the gap is closing. Twenty years ago, the percent of Black children born to unmarried mothers was nearly nine times the percent of White children born under the same circumstances. By the 90s the percentage of Black out of wedlock births had dropped to four times that of Whites. Thus the unfavorable gap had improved between Blacks and Whites but only because the White out of wedlock birth percentage had increased at a faster rate than the Black rate. Still, nearly four out of five Black children are born to a mother that is not married which usually means poor financial resources.

Another measure of preparedness to raise children is the teenage birth rate. The Black teen birth rate in 1988-92 was 137.0 live births per 1,000 females.[15-19] This was 2.8 times the White teen birth rate. The relative risk in 1968-72 was 2.5. It dropped to 2.3 in 1978-82, then increased a decade later.

Table 1 shows the relative risks for eight major chronic diseases for three decennial periods. The 1988-92 relative risks for these conditions range from 1.4 for lung cancer to 3.8 for hypertension.

For cerebrovascular disease, cervical cancer, and liver disease, the death rates have decreased by approximately one half over the three decades for both races. However, for lung cancer, nephritis-nephrosis, and prostate cancer, both races have seen their death rates increase. For four of the eight conditions, the relative risk was significantly higher between the second and third time period or the first and third period.

Although Blacks are not disproportionately represented in the number of chronic disease deaths, Blacks die at an earlier age than Whites. The Black population totals 10.7% of the total population, yet only 10.0% of total deaths in Missouri from the eight chronic conditions studied occurred among Blacks in 1988-92. While 7.1% of White deaths from the eight chronic diseases occur before the age of 55, yet 16.3% of the Black chronic disease deaths occur before this age. If Blacks had the same age-specific chronic disease death rates as Whites, nearly 500 fewer Black Missourians would die annually from the eight conditions.

Another major killer of younger Blacks is injuries. The death rate for all injuries exceeds the rates for all the specific chronic diseases studied. The Black injury death rate is nearly twice the White rate. There is little difference between the Black and White rates for unintentional injuries and Blacks actually have lower rates of suicide than Whites. However, the Black homicide rate is approximately 13 times higher than the White rate. A surprising fact is that this gap in health status was worse twenty years ago when the Black homicide relative risk was 14.5.

In 1992, child abuse and neglect reports made to the Division of Family Services were linked with child fatality review data. Forty-seven percent of the children were Black or six times the White rate. The common denominator of these children was that they primarily came from low income homes, with a mother who was a single parent. The number one cause of death was a lack of supervision at the time of death.[7]

The 1992 relative risk for Blacks for Hepatitis A was 8.1, AIDS --4.2, and tuberculosis--4.0. AIDS data are not available for earlier time periods. Unfortunately, race-specific data are also not available for the earlier decades to determine if the hepatitis and tuberculosis gaps in health status have changed over time.

The other major communicable diseases for which data are available are sexually transmitted diseases. Historically, the sexually transmitted disease relative risks have been high for Blacks. The Black gonorrhea rate was 20 times higher than the White rate in 1968-72 and 16 times higher in 1978-82. While these historical differences seem extreme, the 1988-92 gonorrhea rate among Blacks was 85 times higher than the rate for Whites.

A similar risk difference was found with primary and secondary syphilis. The two conditions are combined for this analysis because they could not be separated for the earlier time periods. The Black rate for syphilis was 27 times higher than the White rate in 1968-72. This gap had dropped to 11.3 a decade later but had increased to 69 to 1 by 1988-92.

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## DOH PROGRAMS TO REDUCE RACIAL HEALTH DISPARITY

**One of two priorities of the Missouri Department of Health is to reduce the health disparities between the minority and non minority population. The following listing expemlifies some of the activities the Missouri Department of Health has implemented to addess this priority:**

**In 1986, the State Director of Health appointed a task force to investigate the health status of minorities in the State of Missouri. Based on recommendations from that task force, the Missouri Office of Minority Health was established by law in 1988. The legislative mandates for the office included: monitoring the progress of all programs in the health department for their impact on eliminating the health status disparity between minorities and the general population; instilling cultural sensitivity and awareness into all existing programs of the Department of Health; developing health education programs and specifically for minorities; coordinating minority health programs provided by other agencies; seeking extramural funding for programs; developing resources within communities; reviewing federal and state legislation for its impact on the health status of minorities, and advising the director of health on matters that affect minorities.**

**In addition, the Minority Health Advisory Committee continues to provide recommendations to the department on issues related to minority health. For example, the Healthy Mothers, Healthy Fathers, Healthy Babies programs initiative, an outreach program to identify pregnant women during the first trimester of their pregnancies resulted from collaborative discussions between department and local staff and the advisory committee. Formal evaluation of the effectiveness of this program has not been completed at this time.**

**Successful, community-based heart health coalitions have been established in the Southeast region of our State. These coalitions demonstrate that empowering community residents to take charge of their health by planning and conducting activities that are appropriate for their community works! Formal evaluation of this program is underway.**

**Other agency efforts are reflected in greater efforts to focus on and fund outreach activities, increasing availability of staff for evening and weekend presentations and community visits, working with new, nontraditional partners (i.e..., barber and beauty shop owners, churches and temples, private sector representatives, community residents and local leaders, etc.) In addition, a more specific focus on increasing cultural awareness and reducing prejudice has been initiated successfully within the state health department and several of its district offices.** ■

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## DISCUSSION

The overall health status of the Missouri population has improved over the last several decades as seen through improved life expectancy and reduced infant mortality. Although Blacks have shared in this improvement, the gap in Black-White life expectancy remains at 7.1 years in 1990 (from a gap of 12.3 years in 1950). From this overall indicator of health status, we can conclude that the health of Blacks has improved over time but still lags behind whites.

Similar improvement, however, has not occurred for Black infant mortality which has shown a statistically insignificant increase over the level of 20 years ago. This lack of improvement may be related to a complex array of social factors, which may include poverty, the vast majority of Black children being born to unmarried mothers, and drug abuse. Concomitant with these trends has been a lack of improvement in the Black inadequate prenatal care rate in comparison with Whites. This fact may partly explain why the relative risk for Black low birth weight babies has remained at approximately 2.3 for the last three decades.

In 1988, the eligibility for Medicaid was changed from 37% to 100% of poverty level for pregnant women, and increased again to 133% in 1990. It was hoped that this would help alleviate the access problem and result in improved pregnancy outcomes. While the number of pregnancies covered by Medicaid more than doubled from 1987 to 1990, there was no significant change in the outcomes of Missouri Medicaid births. Other studies conducted in Massachusetts have shown that providing health coverage did not improve the health status of low income infants or mothers[11] It is apparent that reducing financial barriers to obtaining prenatal care cannot singly solve the problem. In a DOH study on barriers to prenatal care conducted in 1987-88,[12] we found that even after adjustment for confounding variables, Medicaid eligible women were 1.9 times more likely to have inadequate prenatal care than non Medicaid eligible women.

Covington et al[13] found women who received their prenatal care from public clinics had better outcomes than women who received care from private physicians. Women who are in poverty, who have transportation problems, have low educational attainment which creates barriers in understanding, who may have a drug problem or lack adequate housing require an intensive health delivery system to overcome the myriad of social and health problems. Providing a health insurance card and making the routine health delivery system available may not see a reversal of today's trends for Black women and their infants unless the traditional public health and social service functions which address the social problems of the family are augmented at the same time.

The chronic disease analysis shows that the racial gap in chronic disease health status which existed twenty years ago remains about the same today. Blacks are known to have a higher prevalence of risk factors such as cigarette smoking, hypertension, high cholesterol, physical inactivity, and obesity which are associated with chronic diseases.[14] Few historical data exist to determine whether the continued disparities in chronic disease mortality are due to behavioral risk factor trends or other social conditions.

Otten et al[15] found in their study on risk factors and excess Black mortality that the risk factors of smoking, systolic blood pressure, cholesterol level, body-mass index, alcohol intake, and diabetes explained 31% of Black excess mortality. Thirty-eight percent of excess mortality was explained by family income and the remaining 31% was unexplained. This study suggests that only about a third of the Black excess mortality is amenable to prevention by health care providers encouraging change in the health habits of Blacks. It is unclear how much of the over one- third of excess deaths related to poverty would be amenable to change if there was universal health care. The study demonstrates that there is a sizable proportion of excess Black deaths for which there is no known explanation.

The magnitude of the differences in maltreatment death rates for Black and white children and the differences in Black and white homicide rates are indeed striking. Some may want to argue these deaths are a criminal justice problem and not a health problem. However, when the number one cause of death for Black children age 1 to 4 years is maltreatment and for Black men age 15 to 39 is homicide, one must accept the fact that to increase the life expectancy of Blacks requires an understanding of how to prevent such deaths. It may be that as part of the solution to attacking tuberculosis and some other communicable conditions of the past relied upon both medical advances and an improvement in social, physical, and economic conditions, the answer to preventing intentional injuries may come from the science of prevention and an improvement in living standards.

This combined therapy may also be the needed prescription to reduce the racial gap in health status for communicable diseases and sexually transmitted diseases. There is increasing concern that drugs used in the past to treat tuberculosis and syphilis are becoming less effective. Continued clinical research is needed to keep abreast of the changing forms of the disease. However, the real answer to closing the gap in communicable disease health status is through prevention.

## CONCLUSION

The health status of Blacks has historically been worse than whites and with few exceptions the gap in health status has not narrowed over the last two decades. This has occurred despite the fact that Medicare was established during this period and eligibility for Medicaid was expanded considerably. Many Blacks still do not have access to health care services. Race, particularly the Black race, has become a surrogate for variables such as low income, poor education, and unemployment, all of which affect health. But there are indications that even when access is improved, other social and economic conditions may limit the ability of the medical care system alone to eliminate the gap in health status.[16] It is important that the needed elements of a reformed health care system be defined in a broad context so that we address social barriers, along with the health care access barriers of the Black population.

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## The Authors

Garland Land, MPH, Bruce Gibson, BS, and Wayne Schramm, MS, are from the Missouri State Center for Health Statistics, Missouri Department of Health.

**Reprint requests to:**

**Garland Land, MPH**
**P.O. Box 570**
**Jefferson City, MO 65102**
**tel. 751-6272; fax 526-4102.**

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# Informed Consent in Missouri: Where Has It Taken Us?

Frank I. Clark, MD, JD

**Between 1987 and 1990 there has been an increase in the number of medical malpractice claims in which lack of informed consent was the sole allegation. This should alert physicians to the need for a better awareness of recent changes in the doctrine of informed consent. Some states have liberalized the scope of the disclosure made to the patient, but Missouri has resisted any further doctrinal expansion in this area. In contrast, changes in the law relating to the doctor/patient relationship are more universally applied and permanent. It is clear that any actual treatment or nontreatment decision remains solely a right of the patient (parent or surrogate). Easily applied guidelines for obtaining informed consent that incorporate these changes are suggested.**

Medical malpractice lawsuits have been increasing in frequency for several years.[1,2] Between 1976 and 1986, 18% of malpractice claims that included an informed consent-related issue listed lack of informed consent as the sole allegation; between 1987 and 1990, the ratio had increased to 30%.[3] This litigation has resulted in significant changes being made to the doctrine of informed consent.[4-7] In response, physicians have documented a number of patient-specific variables that make obtaining truly informed consent difficult both to define and obtain.[8-11] After a period of liberalizing expansion, law began to appreciate these valid physician concerns with the result that there has lately been some "legislative retrenchment and judicial inertia."[2,12] This article first reviews the general concept of consent to medical treatment. The multiple sources of the consent doctrine are briefly detailed to illustrate how and where changes can occur. The significant changes in the case law and their impact on clinical medical practice are noted. Finally, guidelines tailored to these changes are offered in the hope that their incorporation in the physician's practice will facilitate better doctor-patient communication and result in fewer lawsuits.

## CONSENT IN GENERAL

It has long been understood that consent is required to examine and treat a competent patient because of the common law definition of a battery: the mere touching of another human being without that person's consent.[13] Consent can generally be found as either implied consent or express consent.[14] For example, implied consent occurs when a patient extends an arm for a requested blood test; the patient is implying permission to be touched for purposes of performing the test.

Informed consent is just an express consent for a particular treatment or procedure. Although this express consent is embodied in the oral communication between the doctor and the person granting consent, the fact that it occurred is usually evidenced in writing.[15] It helps to remember that the words "informed consent" identify the two elements to be satisfied: the transmission of information and the obtaining of approval.

## THE LEGAL SOURCES OF INFORMED CONSENT

The first source of authority for the doctrine of informed consent is constitutional law; it defines the outer boundaries of the doctrine. The dicta of *Cruzan* affirmed the concept of refusing care as a corollary of consent and based it in a liberty interest that competent adult has in controlling what is done to his or her body.[16] The Supreme Court has held that parents have the right to make these medical decisions for their minor children as long as their decision is reasonable.[17,18] Unreasonable parental choices can be challenged; only if the choice is determined to be unreasonable will the state then exercise its parens patriae authority and order appropriate care for the child.[19]

A second source of authority concerns the process of obtaining the actual approval. Missouri has a statute specifying who may give consent for medical treatment for both adults and minors.[20] Missouri differs somewhat from other states in that if a parent is absent, the state has a preference for an 18-year-old sibling over a grandparent. Missouri also uses the statutory mechanism to solve such problems as how to obtain consent for the adult who becomes incompetent.[21] The physician should not be overly concerned about subsequent changes to the consent statute; it is reasonably inclusive and is not likely to be amended.

The third source of authority deals with the "informed" portion of informed consent and poses the most difficulty for the physician. The requirements for the transmission of information are based on precedent in the case law and will vary from state to state. This potential for change makes exact advice impossible; today's bright line can be erased by tomorrow's ruling.

## CHANGES IN THE CASE LAW

An often cited 1914 case dealt with the issue of consent as a battery action because there was in fact no consent.[13] Over the next few decades courts developed the doctrine of informed consent as a negligence cause of action with the central issue being the adequacy of the consent. The legal standard governing the amount of information given to the patient (the scope of the disclosure) was always framed from the physician's viewpoint; i.e., would a reasonable physician have disclosed this fact to the patient.[2] In 1972 a period of liberation began with the *Canterbury* decision in which a 19-year-old man was not informed of the risk of paralysis following a laminectomy.[4] This case expanded the doctrine of informed consent by two distinct means.

First, there was an expression of the notion that consent necessarily involves some choice on the part of the person giving the consent. As the decision states, "true consent to what happens to one's self is the informed exercise of a choice, and that entails an opportunity to evaluate knowledgeably the options available and the risks attendant upon each."[4] A 1983 Connecticut case held that not only must physicians inform their patients of the preferred surgical procedure (closed renal biopsy), they were also obligated to disclose the more hazardous but also feasible procedure (open renal biopsy).[5] The court reasoned that to do otherwise robbed a patient of his chance to make an intelligent choice; if a patient were only presented with the least hazardous option, then in reality the patient is only validating what has already been chosen by the physician. Finally, the California Supreme Court has held that if a patient is going to decline a recommended test or procedure, then the physician has the duty to advise the patient of the risks of not performing the test or procedure (informed refusal).[6]

Secondly, *Canterbury* adopted a new legal standard to determine if physicians had given a patient a sufficient amount of information on which to make a choice.[4] Instead of measuring adequacy based on what a reasonable physician would tell a patient (the professional standard), it adopted a standard that measured the scope of this disclosure on the basis of what a reasonable patient would want to know in order to make an informed choice (the materiality rule or prudent patient standard).[4] Plaintiff's lawyers favored this because it allowed more cases to be heard by a jury without a physician expert.[4] In an attempt to put some limit on the amount of information a physician must give a particular patient, the court held that only material risks must be disclosed.[4]

Physicians understand that categorizing all risks of a particular treatment or procedure as material is difficult. The definition is subjective and patient-dependent.[8-10] The person granting consent may prioritize needs differently than the physician,[10] or the competency of this person may be a concern.[11] Courts have begun to realize the difficulties in applying this patient-oriented standard.[2] Missouri has decided to retain the professional standard because adopting the patient-oriented standard would give the jury a "roving commission" to disregard the element of causation.[12] In other words, the jury might consider the failure to inform the patient of a risk that had no relation to the cause of the injury. The liberal expansion regarding the scope of disclosure seems to be stalled; slightly more than half of the states retain the professional standard.[2]

In contrast, the portion of the *Canterbury* decision detailing the need for true choice on the part of the person giving consent has unalterably changed the concept of the doctor/patient relationship. Scholars are aware that in practice most older physicians outline a suggested treatment plan and their patients simply defer to the physician's judgment.[2,10,22] This is commonly referred to as "medical paternalism."[22] There is some suggestion that this attitude is changing as both patients and younger physicians become more aware of the competent patient's rights.[2]

Since many lawsuits arise out of poor doctor-patient communication,[1] it is appropriate that physicians share their medical knowledge with their patients and attempt to understand how treatment choices impact on the priorities of patients and their families.[10] It is appropriate for the physician to show empathy by sharing the grief for the underlying medical condition.[23,24] However, the physician should not contemplate any other role in the actual making of the decision. When the Ethics Commission described its concept of "shared decision making," it was attempting to strike a balance between the prevailing model of "medical paternalism" and a proposed model designated as "patient sovereignty."[22] A close reading of the report indicates that the Commission never intended that the patient be shorn of the right to make the actual treatment decision.[22] Since the Ethics Commission published its report, the law has chosen patient-directed care as the standard;[16] the actual decision remains a patient right and is not shared. The person granting consent does ultimately control the process even if the choice is not one the physician would make.[10,15] The doctrine of informed consent has evolved to require that what is shared is the physician's medical knowledge in an amount and at a level of comprehension that will provide the basis for the patient's own choice. It would seem the physician has acquired the role of educator.

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## GUIDELINES FOR OBTAINING INFORMED CONSENT

The following guidelines are general advice intended to serve as a baseline for obtaining adequate informed consent. Items three through eight are loosely borrowed from an unusually explicit recent Mississippi case.[7]

1) The law will presume that the person granting consent is competent to do so. If the physician has reason to suspect that this individual may be incompetent, a more formal approach to assessment and documentation is indicated.
2) Do not confuse the documentation with the communication itself. The signed consent form is only a record that the communication took place. It is the content of the communication that may be argued in the courtroom. It is therefore always wise to provide additional documentation of the communication in the progress notes.
3) Always begin by explaining the patient's diagnosis (or potential diagnoses) and briefly the basis for your making it. Sometimes physicians will neglect this element; its importance lies in the fact that everything else in the consent process is predicated upon it.
4) Explain the nature and purpose of the proposed treatment or procedure in terms the person granting consent can comprehend.
5) Explain the risks and consequences of the proposed treatment.
6) Inform the patient (parent or other surrogate) of the probability for success with the proposed treatment or procedure.
7) Explain any other feasible treatment alternatives. If you have a preference for treatment plan A over treatment plan B, then you should give a reason for your preference.
8) Explain the prognosis if the proposed treatment is not rendered.
9) Ask the patient (or other person granting consent) if he or she has any questions. This frequently forgotten step is the physician's self-check on the effectiveness of the communication and the level of the patient or surrogate's comprehension.

## CONCLUSION

Practicing medicine in a paternalistic style can be a rewarding experience for the doctor. Patients may often state a preference to the physician for this approach to treatment decisions. This model seems to serve both parties well as long as the anticipated outcomes are actually achieved.

Unfortunately, unforeseen complications may arise and unexpected outcomes may be thrust on the patient. Should the patient (parent) decide to seek a remedy through the tort law, the physician will likely find that the law has set a standard for informed consent that the doctor has failed to meet.

The altered dynamics of the doctor-patient relationship constitute the most significant changes in the doctrine of informed consent in recent years. Today, it is clear that the true choice either between treatment plans or treatment versus non-treatment. While adoption of these precepts may initially seem cumbersome, the long term benefit of patient-directed care should be improved communication between doctor and patient with fewer malpractice suits as a result.

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### The Author

Frank Clark, MD, JD, is a neonatologist at the University of Missouri-Columbia, Department of Child Health, N708 Health Sciences Center, One Hospital Drive, Columbia, Missouri 65212.

# Increasing Profitability... It's the Little Things That Count

by Sidney A. Dulle, CPA

As fee resistance continues and the cost of doing business rises, the physician finds it more and more challenging to produce a profit. As with most things in life, profitability is the result of attention to detail, which may include a variety of cost-saving measures.

You may wish to consider the following as a checklist of cost-saving measures. What is right for you will depend on your current arrangements. Consider carefully before implementing any idea. Remember, all change is not progress just as all motion is not forward!

### ✓ UTILITY COSTS ADD UP.

Consideration should be given to employing "smart" thermostatic controls within your office. Nighttime and weekend downtime should be programmed to reduce energy consumption. This is usually one of the simplest and most cost-effective measures one can take to decrease operating expenses.

### ✓ LEASE VS. PURCHASE OF OFFICE EQUIPMENT.

Most equipment typically found in a physician's office is available through either lease or purchase, or lease arrangement with option to buy. What is most profitable for you? The correct answer is the product of underlying economics, tax advantages, and future needs. Your accountant should be the focal point of input for making a recommendation to you. Let us use your copy machine as an example (or telephone system, or computer hardware, or x-ray equipment, etc.). Your copy machine company can provide the various financing options for machines suitable for your needs. Your accountant can assess current costs including maintenance, supplies, and utilization rate. You will then need to predict future needs and level of usage. Allowing for tax ramifications, a final recommendation for lease, purchase, or a combination can be presented to you by your accountant.

### ✓ TELEPHONE SERVICE IS A COMPETITIVE GAME.

Who of us has not been bombarded by the offers and claims of competing telephone service carriers. Evaluating each service is usually quite difficult. Often, it is a matter of comparing apples to oranges. One solution to this problem is to request a pricing for service from each carrier in your area for the telephone usage that you have experienced over the past six months. Submit copies of your past six months telephone bills asking, "How much would you have charged me?" Let *their* fingers do the walking. If they are truly interested in your business, you will end up with apple/apple comparisons.

### ✓ INVITE PROPOSALS FOR PROPERTY AND CASUALTY INSURANCE.

The request for proposal, usually every three years, helps assure proper pricing for insurance coverage. Your existing carrier should sharpen his pencil, and other companies invited to the process appreciate the opportunity to bid. Again, as with telephone service proposals, it is important to end up with apple/apple comparisons. For this reason, include in your requests for proposal the coverage required as per your exiting policy levels. This exercise also allows you to focus on your insurance protection levels. Adjust as necessary.

### ✓ LET IDLE FUNDS WORK FOR YOU.

Most banking institutions provide checking arrangements that involve crediting you for interest on available funds, or little or no bank charges, or both. Contact your banker and ask, "What services does your bank offer in this area?" As is the case with most professionals, you will generally find banks receptive to offering packages that fit your needs.

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## GUIDELINES FOR OBTAINING INFORMED CONSENT

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2) Do not confuse the documentation with the communication itself. The signed consent form is only a record that the communication took place. It is the content of the communication that may be argued in the courtroom. It is therefore always wise to provide additional documentation of the communication in the progress notes.
3) Always begin by explaining the patient's diagnosis (or potential diagnoses) and briefly the basis for your making it. Sometimes physicians will neglect this element; its importance lies in the fact that everything else in the consent process is predicated upon it.
4) Explain the nature and purpose of the proposed treatment or procedure in terms the person granting consent can comprehend.
5) Explain the risks and consequences of the proposed treatment.
6) Inform the patient (parent or other surrogate) of the probability for success with the proposed treatment or procedure.
7) Explain any other feasible treatment alternatives. If you have a preference for treatment plan A over treatment plan B, then you should give a reason for your preference.
8) Explain the prognosis if the proposed treatment is not rendered.
9) Ask the patient (or other person granting consent) if he or she has any questions. This frequently forgotten step is the physician's self-check on the effectiveness of the communication and the level of the patient or surrogate's comprehension.

## CONCLUSION

Practicing medicine in a paternalistic style can be a rewarding experience for the doctor. Patients may often state a preference to the physician for this approach to treatment decisions. This model seems to serve both parties well as long as the anticipated outcomes are actually achieved.

Unfortunately, unforeseen complications may arise and unexpected outcomes may be thrust on the patient. Should the patient (parent) decide to seek a remedy through the tort law, the physician will likely find that the law has set a standard for informed consent that the doctor has failed to meet.

The altered dynamics of the doctor-patient relationship constitute the most significant changes in the doctrine of informed consent in recent years. Today, it is clear that the true choice either between treatment plans or treatment versus non-treatment. While adoption of these precepts may initially seem cumbersome, the long term benefit of patient-directed care should be improved communication between doctor and patient with fewer malpractice suits as a result.

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### The Author

Frank Clark, MD, JD, is a neonatologist at the University of Missouri-Columbia, Department of Child Health, N708 Health Sciences Center, One Hospital Drive, Columbia, Missouri 65212.

# Increasing Profitability... It's the Little Things That Count

by Sidney A. Dulle, CPA

As fee resistance continues and the cost of doing business rises, the physician finds it more and more challenging to produce a profit. As with most things in life, profitability is the result of attention to detail, which may include a variety of cost-saving measures.

You may wish to consider the following as a checklist of cost-saving measures. What is right for you will depend on your current arrangements. Consider carefully before implementing any idea. Remember, all change is not progress just as all motion is not forward!

## ✓ UTILITY COSTS ADD UP.

Consideration should be given to employing "smart" thermostatic controls within your office. Nighttime and weekend downtime should be programmed to reduce energy consumption. This is usually one of the simplest and most cost-effective measures one can take to decrease operating expenses.

## ✓ LEASE VS. PURCHASE OF OFFICE EQUIPMENT.

Most equipment typically found in a physician's office is available through either lease or purchase, or lease arrangement with option to buy. What is most profitable for you? The correct answer is the product of underlying economics, tax advantages, and future needs. Your accountant should be the focal point of input for making a recommendation to you. Let us use your copy machine as an example (or telephone system, or computer hardware, or x-ray equipment, etc.). Your copy machine company can provide the various financing options for machines suitable for your needs. Your accountant can assess current costs including maintenance, supplies, and utilization rate. You will then need to predict future needs and level of usage. Allowing for tax ramifications, a final recommendation for lease, purchase, or a combination can be presented to you by your accountant.

## ✓ TELEPHONE SERVICE IS A COMPETITIVE GAME.

Who of us has not been bombarded by the offers and claims of competing telephone service carriers. Evaluating each service is usually quite difficult. Often, it is a matter of comparing apples to oranges. One solution to this problem is to request a pricing for service from each carrier in your area for the telephone usage that you have experienced over the past six months. Submit copies of your past six months telephone bills asking, "How much would you have charged me?" Let *their* fingers do the walking. If they are truly interested in your business, you will end up with apple/apple comparisons.

## ✓ INVITE PROPOSALS FOR PROPERTY AND CASUALTY INSURANCE.

The request for proposal, usually every three years, helps assure proper pricing for insurance coverage. Your existing carrier should sharpen his pencil, and other companies invited to the process appreciate the opportunity to bid. Again, as with telephone service proposals, it is important to end up with apple/apple comparisons. For this reason, include in your requests for proposal the coverage required as per your exiting policy levels. This exercise also allows you to focus on your insurance protection levels. Adjust as necessary.

## ✓ LET IDLE FUNDS WORK FOR YOU.

Most banking institutions provide checking arrangements that involve crediting you for interest on available funds, or little or no bank charges, or both. Contact your banker and ask, "What services does your bank offer in this area?" As is the case with most professionals, you will generally find banks receptive to offering packages that fit your needs.

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# Point of Care Documentation: A Viable Alternative

Joyce Z. Griffin, RN, PhD and Linda K. Woolery, BSN, PhD

It has become patently obvious that the labor-intensive paper patient record system is no longer acceptable because it can not provide the cost effective, accurate, high quality documentation required by accrediting bodies, review commissions, third party payer or litigators. Many institutions have adopted point of care electronic patient recording as an alternative, but resistance remains strong.

Systems which allow the collection of information at the bedside, point of care systems, can alleviate many problems encountered in the paper medical record. Point of care systems assume the following: 1) critical pathways for managed care will be implemented (since this is a trend found in most paper record systems); 2) standardized documentation format will be continued and refined with standards of care the end product.

The easiest way to describe the automated features of a point-of-care system is with a patient care situation example.

Ms. E. Mother is admitted to the hospital for a C Section delivery. The patient's name and admitting diagnosis are entered and the computer screen automatically shows critical pathway standards for a patient giving birth by cesarean section. This screen serves as a consultant to the doctor who is ultimately responsible for writing the patient's orders. The ideal computerized system would automatically transfer the doctor's orders from entry point of care to the health care members charged with implementing those orders.

The physician could write orders for the patient based on professional preference; however it is more common to follow critical pathways with standard orders which can be customized as required by the patient's condition. The staff would then implement the critical pathway for each day the patient is hospitalized. If the patient's progress and orders follow the expected (pathway), then the staff would document there are no exceptions to the pathway.

If, for example, the patient had an elevated temperature with congested lung fields on post-op Day 2, documentation of these findings would be on the point of care system. A display of the patient's computerized record with access to the patient's on-line critical pathway would illustrate the variance. In this case, the patient was not cooperative with turning, coughing, deep breathing and ambulating to promote adequate ventilation. The documentation of exceptions from prescribed treatment and expected outcomes would reveal this information.

A consultant system could be accessed by clicking a mouse inside the Day 2 vital signs box where suspected causes for the temperature variance from normal would be presented. One rationale could be that the patient was a heavy smoker and, in this case, the history review would indicate the patient was a smoker for four years. This additional information with the documented treatment variances and physical findings would indicate the most probable cause of the temperature elevation was related to the respiratory system.

Health care reform requires information systems which can provide voluminous amounts of valuable data to health providers, third party payers, litigators, credentialing bodies and policy makers. A point-of-care system collects information at the time of care and documentation is an automatic by-product in the delivery of that clinical care. Point-of-care systems can facilitate electronic transfer of inpatient clinical, administrative and payment data between departments, care facilities, physician's offices, pharmacies, employers and third-party payers. With a point-of-care system at the patient's bedside and the appropriate technology with security system, from a computer in your office you could:

1. **Determine your patient's readiness for discharge by viewing critical pathway status.**

2. **View trends or the most recent lab results, vital signs and progress variances for your patients.**
3. **Obtain vital information for timely third party billing to enhance prompt payment.**
4. **Access records readily for Quality Improvement Audits.**
5. **Access records, standards of care, consultant systems and documentation when litigation is a potential or reality.**
6. **Avoid unnecessary crisis visits. Staff could access the consultant system for assistance with situation assessment, problem definition and relay results via computer. Unscheduled visits would only be for situations which required your professional hands on expertise.**

Point of Care electronic documentation (POCED) is an innovation on the cutting edge of progress in heath care delivery which could make the critical difference between quality of services to a few at a high cost through an individual choice system and a cost effective service(s) system for many through some type of group plan. Point of care systems have appeared during an era conducive to change. There is also a momentum potential for acceptance of these types of innovations. POCED is not a panacea but it does represent a creative adaptation to meet societal needs which uses professional trends, technological advances, political climate and societal demands for more care and better quality care for less cost. ■

## ACKNOWLEDGEMENT

This article was supported in part by grant #LM07089 from the National Library of Medicine. The content of this article does not represent an official view of the National Library. The authors are totally responsible for the content.

## The Authors

**Joyce Z. Griffin, RN, PhD,** is a post doctoral fellow in Medical Informatics at the University of Missouri-Columbia. Her research interests are Education: An Empowerment Tool and Integration Strategy: System of Planned Change.

**Linda K. Woolery, BSN, PhD,** is an Assistant Professor in the School of Nursing at the University of Missouri-Columbia. Her research interest is Nursing Informatics and Preterm Birth Prevention.

**INCREASING PROFITABILITY,**
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### ✓ A POSTAGE METER MAY SAVE YOU MONEY.

Automatic postage meters save both staff time and prevent "over postage" by allowing exact postal amounts required. Cost effectiveness depends upon the nature and frequency of mailings as well as availability of staff. A postage meter company representative will generally assist in determining the machine that is right for you.

### ✓ DEVELOP A BUDGET--WHY?

A budget is a map for your financial future. Think of it as a roadmap to the destination of your choice. You decide where you want to be at the end of a period of time given the resources that you have available. You are more likely to achieve your goal with a well thought out, realistic map. Once prepared, other people will be doing the driving. Just as with the roadmap, your financial map or budget should be compared with real progress to date. Before you get too far off course, corrections can be made. Sit down with your office manager and accountant at least quarterly to see what may need to be done to reach your destination. Just heading west by dead reckoning may get you to Death Valley rather than Disney Land.

Additional ideas for improving practice profitability may be found in *Physicians Support Research Manual*, Volume I, 1990, Pages 7-8, **Checklist for Profitable Practice**, Mike Martin, President, Practice Support Resources 7001 North Locust, Suite 202, Gladstone, Missouri. Telephone 816/436-6119. Should you care to compare your financial statements with those of similar size, you may wish to obtain the reference book, *Financial Studies of the Small Business*, 15th edition, available through Financial Research Associates, 7616 Southland Boulevard, Suite 111, Orlando, Florida 32809. ■

**Sid Dulle, CPA** is from Dulle & Associates Public Certified Accountants in Jefferson City, Missouri.

# Caring for Your Practice: Maximizing Quality and Effectiveness Through Practice Management Services

Janet E. Treadwell and Melissa A. Richards

Economic and political influences mandating changes in the health care delivery system have created an environment where practice management is vital. The entire health care system is moving out of an era of cost containment and into an era of accountability.[1] Decisions regarding health purchases are being made based on cost, on utilization, and increasingly, on quality of care and treatment outcomes.[2] Today, physicians are being asked to demonstrate their ability to provide high quality, medically appropriate, effective, and economical health care to an expanding patient population.[3]

The key to demonstrating performance lies within a physician's capability to collect and use information regarding a patient population, practices, and outcomes to effectively manage a practice while documenting results over the continuum of care. The alternative to self monitoring is to relinquish control and allow external entities to collect and interpret such information. For example, payers are currently collecting data on selected subgroups of physicians' patient populations to make decisions regarding network inclusion and reimbursement. However, physicians themselves are in the best position to collect the most accurate information, and this information need not be restricted to patient subpopulations.

Practice management services can facilitate collection, analysis and reporting of data concerning a practice's patient characteristics, treatment plans, treatment outcomes, patient satisfaction, and cost utilization [Fig. 1]. Integration of these data using continuous quality improvement and outcomes measurements promises to provide a number of benefits to physicians and their practices. Foremost, such information is essential for maximizing the effectiveness of clinical treatment outcomes. In addition, the data can be used to validate practice effectiveness to payers. Providers who can demonstrate optimal patient management will also be able to compete for patients and network inclusion on quality as well as price. In short, physicians who efficiently deliver and document care will be positioned to adapt to whatever changes reform brings to the healthcare delivery system.

## DATABASE CONSTRUCTION

Physicians have always cared about results however they have not typically measured, tracked, or reported outcomes in terms that matter to patients and payers.[4] To construct an appropriate database, physicians need to conduct practice evaluation on aggregate and specific bases to identify the value of services offered by his or her practice. Value can be defined as the process of 1) maximizing quality, 2) maximizing patient services, and 3) minimizing per year patient costs.[5] Physicians can demonstrate the positive impact of efficient medical management by combining already existing data in accounting systems with additional quality management information. Dimensions of quality which require tracking include patient characteristics of risk appraisal, patient satisfaction, cost utilization, and treatment outcomes. The value of a healthcare process can be judged with information from these components.[6] Quality management information can be gathered with the use of standardized tools which eliminate bias and lend credibility to the results. Examples of such tools include the Patient Satisfaction Questionnaire, Health Status Questionnaire, GHAA Consumer Satisfaction Form, CDC Questionnaire and Carter Center of Emory University Health Risk Appraisal.[7]

## PATIENT CHARACTERISTICS

Reviewing the characteristics of your patient population identifies health risks. Using tools such as the Health Risk Appraisal assists in evaluating potential health care utilization, identifying preventive care necessary, tracking changes in risk for comparative measurement, and documents and individualizes a plan of treatment. A University of Colorado Medical School study found that the top 10% of employees account for 65% of medical expenses.[8] Identification of these patients in a practice population with associated characteristics of high health service consumption is useful for resource planning of supplies, manpower and costs. For example, Jefferson Smurfit, a Missouri-based employer can attribute 30% of health care claim expenses to 1% of employees.[9] This type of information has resulted in employers initiating benefit programs requiring a physician examination and health risk appraisal. These programs have been successful in reducing risks and decreasing overall health care costs, protecting against unanticipated complications and hospitalizations.[10] Use of risk appraisal tools to collect data at time of initial patient intake allows the physician to identify potential predisposition to components associated with health service utilization.[11] Aggregate patient characteristic reporting is also advantageous when identifying target populations for future marketing initiatives. Feedback from the appraisals not only serves a clinical purpose for the physician but can be used as a tool in patient education and for enhancing patient satisfaction.

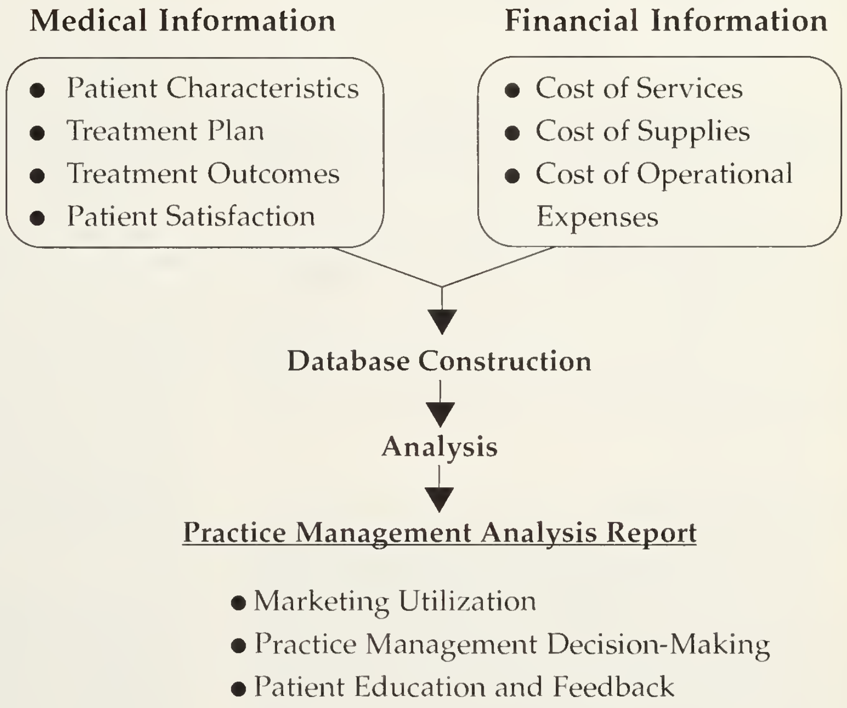

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**Figure 1. Quality and Effectiveness Practice Management Model.**

## TREATMENT PLAN

The physician treatment plan defines services which impact patient outcomes and cost utilization. Specific treatment plans can be supported through the use of standardized practice guidelines. Practice guidelines enhance patient management. AMA Executive Vice President James S. Todd, MD supports clinically useful practice guidelines as being the future of medicine.[12] Practice guidelines are widely available in written format and on software.[13] Physicians may procure guidelines for the diagnoses and conditions that make up the predominant portion of their practice. Use of guidelines assists in decreasing practice variation for conditions where hard evidence about optimal management of patients does not exist.[14] Clinical practice guidelines allow a physician educational support on optimal treatment plan information for particular conditions and procedures. Use of professionally accepted guidelines may also help reduce physician exposure to potential malpractice claims by documentation of compliance with expert-developed standards of practice.[15] Use of guidelines has been found to be beneficial in increasing patient satisfaction and reducing hospital stays.[16]

## PATIENT SATISFACTION

In addition to the clinical information obtained from treatment plans, incorporating the patient's perspective through the use of a satisfaction questionnaire provides patient management information. Physicians need to be able to measure the satisfaction patients have with their services as part of a thorough quality improvement process. Information received provides data on both the health care services delivered and on the providers of care. Validated questionnaires such as the Patient Satisfaction Questionnaire are applicable across populations and yield reliable measures reflecting care received, personal preferences and expectations.[17] Questionnaires administered across populations over the continuum of care provide comparative practice management information which can be assimilated into quality improvement initiatives.

## TREATMENT OUTCOMES

Physicians can use treatment outcomes information to assess and identify therapies, estimate resource con-

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sumption and establish treatment plan standards. Outcomes management is defined by Paul Ellwood, leader in outcomes measurement research, as a technology of patient experience designed to help patients, payers, and providers make more rational medical care-related choices on the patient's life.[18] Outcomes management provides a continuous process linking health outcomes with medical care through a feedback mechanism.[19] One of the most widely used outcomes tool involving patient self-reporting is the Health Status Questionnaire (HSQ). The HSQ has been used in various settings and shown to be valid and reliable across diverse patient groups.[20] As with the patient satisfaction tool, outcomes data collection should occur at prescribed times over the care continuum.

## COST UTILIZATION

Under proposed health care reform initiatives, physicians will be paid according to either a regionally negotiated payment schedule or against Accountable Health Plan contract rates.[21] This type of reimbursement gives physicians incentive to focus on making their entire patient population healthier instead of focusing on discreet events.[22] Costs of services, supplies, and operations need to be collected over episodes of care and correlated with medical information for optimum practice management. Information on physician fees and services are quickly becoming public domain through vehicles such as the recent guide to St. Louis physicians distributed to 60,000 area employees.[23] Physicians who are able to correlate patient characteristics, treatment, and outcomes with the finances of service delivery will be best positioned to attract patients and the most attractive health plans in the future health care environment.

## PRACTICE MANAGEMENT ANALYSIS REPORT

Practice management processes which collect medical and financial information maximize quality and effectiveness. Practice management reporting of quality and outcomes measurements when combined with financial account data provide the basis for a comprehensive analysis of the value delivered by a physician's practice. Documentation of this value is important to demonstrating accountability in the new health care environment. The practice analysis report provides physicians with marketing material to aid effective negotiations with payers, hospitals, health purchasing coalitions, and other entities.[24] Analysis information also helps physicians in their decision making process when evaluating and implementing improvements to operational processes. Data integration allows a physician to view their population by variable of health risks, treatments, outcomes, costs and patients'satisfaction. Resultant information regarding approaches to appropriate treatment plans can be useful when educating patients and providing outcomes feedback. Practice management is a process of caring for physicians' practices by facilitating the collection, analyses, and reporting of these data.

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**Janet E. Treadwell and Melissa A. Richards are from Healthcare Continuum, Inc., in St. Louis, Missouri.**

# Enjoy Preparing for the Oral ABPN Board Exam

## *Learn the Game of Show-and-Tell*

Winston W. Shen, MD

The Part II Examination given by the American Board of Psychiatry and Neurology, Inc. has both a live patient and a videotaped interview. After completing or watching a 30-minute interview with a patient, you will be quizzed for the next half an hour by two board-certified examiners. During the question-and-answer half of the interview a senior examiner will drop in as a floater and stay for a while each time. This examiner may also interrupt and ask some questions. The setting is usually in a psychiatric hospital or a clinic. Two examiners give written reports on your performance and knowledge, and the senior examiner (the floater) works with a director to decide whether you pass or fail. Here are some of my ideas on how to handle this part of the oral examination in the context of a show-and-tell game.

### TO SHOW

You should understand that the live patient interview is not a typical psychiatric interview we do in the clinic or on the inpatient ward. It is a show-and-tell game. In my opinion, the live patient interview of the board exam gives three basic purposes: 1) to observe how a candidate relates and communicates with a patient, 2) to see how the candidate grasps and understands the case, including understanding how the patient feels about what is happening in his or her present life, and 3) to give some clinical data base for presentations and questions during the exam.

First things first, you must take a moment to make the patient comfortable. During the patient interview you should ignore your examiners completely. After meeting and establishing a rapport, you should try to let the patient start telling his or her history of present illness (HPI). Listen and ask relevant questions by following leads in order to get a more related and complete history. The interview is not intended to be therapeutic. You must be kind and polite while obtaining necessary and available case information. You should listen actively to what is being said and to what is not being said. An observant listener can get many non-verbal messages. Watch the patient carefully in order to understand his or her communication style. The patient should give a history of alcohol and substance uses, educational and job histories, money problems, family (genetic and social) history, medical conditions, all prescribed medications, current living arrangements, and psychosocial history. Also do a necessary mental status examination. Usually, conducting the mental status exam is not a separate portion of the interview except for direct questions about the content of thought (suicidal or homicidal ideas, hallucinations, delusions, etc.), mental capacity, judgment and insight. By the way, asking a patient to remember three items is a common question to check whether his or her recent memory is intact or impaired. Never forget to follow up the three things you have asked your patients to remember a couple of minutes previously.

Always ask if things had become so difficult that suicide was considered or attempted. The HPI should include prodromal symptoms, the onset of the illness, the course of the treatments, hospitalizations, medication history, and current symptoms if any. You should keep HPI as the core of the interview, and take the related information naturally. Think differentially and exercise judgment derived from a textbook knowledge about a clinical condition. Any voluntary participation from the patient in giving the clinical picture of his or her case is valued. Let the patient talk if the content is relevant. Avoid asking "why" but give brief and open-ended questions to get all neces-

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"The three things you asked me to remember are liberty, the color red, and Mr. Smith." *Drawn by Salvodor Chavez, MD*

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sary answers from the five "W" questions (who, what, where, when and which) related to the HPI in order to better understand the case. The "Why" questions and the monotony of a question-answer, answer-question style will put your patient in a defensive position and appear as a cross-examination. This is a sure failure. These types of questions also interrupt the flow of the interview and make you appear pushy and impatient.

An examiner will signal when you have five minutes left. You should use the rest of the time to make up what was missed and (if you have not done it) to complete the mental status exam as to rule out the possibility of organic mental disorders if the patient's organic mental disorder is not a question in the case. If the patient is suspected for dementia, you should watch for the clues carefully to find out any possible causes of dementia. Most of this portion of the interview time should be devoted to doing a more detailed mental status exam to better establish the extent of organic impairment in mental capacity, etc.

Right before the time is up, you should invite the patient to tell you if anything was not asked or what he or she would like to let you know. Preferably, the interview should end on a positive note by talking about the patient's talents, hobbies, potentials and strengths. Properly address the patient by name (preferably using the last name) in the interview. Show your interest not only for the illness but also for the patient as a person.

After you finish the interview, thank and lead the patient to the door, then return to your seat. By making eye contact with either (or both) examiners you will signal that you are ready for their questions. If you need some time, even a minute or two, to organize your thoughts about the case, do so with or without permission. Usually they will wait until you signal your readiness.

## TO TELL

The most common opening question is how you would summarize your understanding of the case. The purpose of the "tell" part of this show-and-tell game is to convey that you have a good grasp of the case. You never get a second chance to make a good first impression! Usually, I would summarize the whole case in four or five big, elegant sentences. The summary is like an abstract of a journal article that gives a taste of the case by noting the highlights of the history plus the positive symptoms or signs in the mental status exam. In mentally edited and well-organized sentences, the use of key words to characterize the patient's positive family history, medical history, developmental history, psychological history, and so on should be enough and appropriate. In this brief case presentation, avoid any diagnostic terminology and do not assume anything that has not been covered in the interview. If the examiner does not interrupt, continue with a more detailed HPI, then past history, patient's parents, genetics, education, love life, and prior treatments. Stop your presentation clearly and anticipate the next question. Your summary should be eternally and unswervingly loyal to the story obtained from the interview. Where the story is faithful, there, in the end, silence will speak. Where the story has been betrayed, silence is but emptiness.

The next common question is what areas you would like to cover if you had an extra 10 minutes in the interview. You should mention important areas you have missed in the interview, such as any clarification of symptoms, the course of the illness, detailed medication history in dosage, medication compliance, etc. Be brief, just mention a few areas and do not over-list.

You will be asked about differential diagnoses. If the question is not limited to Axis I, make sure to

**"Dr. Doe, don't be afraid of us. We do not carry guns. The worst thing we can do is fail you in this exam."**
*Drawn by Salvodor Chavez, MD*

cover all five Axes as defined in *DSM-III-R*. I would just give a list of the diagnoses in the order of possibility and significance. Usually I give a list of 5 or 6 differential diagnoses on Axis I. This is not the final diagnosis in the hospital medical record, but a list of all possible diagnoses you would like to consider in this case based strictly on the interview. Again, I recommend that you just give the list of diagnoses without elaboration. If your examiner is not satisfied, he or she will ask for elaboration, in which case you can follow up with your diagnostic formulation and rationale to rule in or out a given diagnosis. Beside the data of history and positive symptoms or signs in mental status examination, your explanation should be simple for each diagnosis.

Then, the examiners will follow up with relevant questions derived from the interview and from the content of your presentation. Always keep in mind that your answers should be brief and to the point. Enough is enough. Never overstate your answer if the points of the questions have been covered. The best answer is one that says all that it should, but not all that could be said. The more you talk, the less advantage you will have. Usually the examiners are eager to pass you rather than fail you. The only way they can pass you is to know your strengths and not your weaknesses. Therefore, give your examiners more time to quiz you. If you do not understand the questions well, do not hesitate to ask for clarification. Be safe in answering questions. Do not throw in any ambiguous terminology of which you are not sure. The follow-up question to your self-introduced term can cost you dearly. If you are not sure or if you do not know the answer, do not hesitate to say so. There is no substitute for a correct answer. The examiner will move you from this question a topic area on safer ground where you have better knowledge.

There are two examiners for the purpose of checks and balances in order to avoid biased questions and evaluations. When another examiner asks you a new question or follows up an existing question, you should shift your eye contact quickly to that examiner and ignore the other one. Always answer the question with a look of confidence. You have to at least win their trust in handling the patients they would refer to you. Always be deferential and respectful to your examiners. Never get agitated or argue with them even when an examiner commits a factual mistake. Afterall, we all live in an imperfect world and examiners are human too! Your objective is to manage a safe pass rather than to correct their mistakes. Write to Stephen C. Scheiber, MD of the ABPN to complain if you cannot get your anger out of your system after your return home. In fact, it is equally therapeutic for you to write the letter without mailing it out.

Answer the questions related to treatment plans with great enthusiasm and compassion. You should feel that you are a needed expert who is there to give the most important treatment recommendation in this case. Make sure that you list your treatment plans with hope. Occupational or recreational activities for staff to carry out should also be included in your plan. Keep "biopsychosocial" and "family" conceptualizations in your short-term and long-term plans. Do not say what you do not believe in. You should feel confident with your prescribed treatment proposals. Be interested in the patient's total life. Do not get the feeling that the case is dull and uninteresting. If you want a more interesting case, you have to come back on the next examination date in another city.

Usually, but not always, the selected patients who are verbal enough for the interview, have chronic problems. They are from chronic inpatient wards or outpatient settings and are usually supervised by the staff of residential facilities. Make sure you read the

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textbook chapters well on schizophrenia, mood disorders, alcoholism, substance abuse and organic mental disorders. Make sure that you are well-versed in the diagnostic classification table in *DSM III-R*. You should have an impromptu complete list of differential diagnoses if hallucinations, delusions, or depression is presented as a single symptom. Always remember alcohol and street drugs, and the damage they can do. Be sure to keep an open-mind.

Similar to the interaction with your patient, you should keep intensive and communicative eye contact at all cost with the examiners. Many people keep good eye contact while interviewing the patient but forget good eye contact with the examiners. Always answer questions to the point and succinctly. Let incoherence be a problem of your patient (and maybe of your examiners), but not that of yours. Do not ramble after you reply. Avoid gazing at the window or the ceiling. End your speech hard after completing an answer, as if you were saying good night. Make life easier for your examiners by letting them know when you have finished your answer. Also, if you allow them to quiz you continuously it will demonstrate what a solid and competent physician you are.

Differing from the live patient interview, the videotaped interview is not intended to assess a candidate's performance in relating and communicating with the patient. It offers a "standardized challenge" to all candidates. You can ignore the need for eye contact and take notes if this behavior is desirable for your organizing and understanding the case materials. The main disadvantage is that if you look down at your paper you may miss some interaction. Some candidates are more comfortable with the live patient interview because they feel that they have more control. Others feel more relaxed with the videotaped interview because there is no need to concentrate on the process of the interview and there is more time to grasp and understand the case. The questioning by examiners after the videotape interview is basically the same as the live patient interview.

## EPILOGUE

These guidelines are my general advice to those psychiatrists who are preparing for the Part II Board Exam. My further tips for those who have failed the exam repeatedly are: 1) control your anxiety level by learning the game of show-and-tell but not the tricks of it, 2) get some training in time management to make sure to cover the most essential parts in every interview, 3) get rid of trivia in the interview and presentation, 4) think categorically and logically about all the psychiatric terminology (symptoms, medications, etc.) the next time you study any psychiatric textbook, and 5) if you are foreign-born like me, do not be self-conscious about your accent and you will attract more attentive listening.

One month before I took my Part II Board Exam in Atlanta, Georgia in 1980, I received an offer of help to prepare for the oral exam from a dear friend at the University of California-Los Angeles. Late Thursday afternoon, I arrived in California. After witnessing two of my interviews with patients on a ward at UCLA-Harbor General Hospital, he helped me conceptualize the oral exam. I still remember vividly his enthusiasm as he helped me until midnight to organize and rehearse the case material into four elegant sentences. On the following day, he scheduled five mock exams with five of his colleagues. I was thoroughly worked out by the time I left Los Angeles airport to fly back to Albuquerque, New Mexico. Since then I have been confident that I could pass the exam.

In the past 14 years, I have been thinking of the whole process of preparation. Now I am writing about what I was told and what I have thought through the years. Ask your colleagues for an experience of a mock exam. If you cannot get a board-certified psychiatrist or if your ego does not permit you to do so, pay and obtain one from a commercial company. It will save you in the long run.

Enjoy preparing!

## Acknowledgment

Appreciation is expressed to Merill T. Easton, MD of Omaha, Nebraska, C. Leon McGahee, MD of St. Louis and Milton H. Miller, MD of Los Angeles, for their assistance with this article.

## The Author

Dr. Shen is an associate professor from the Department of Psychiatry and Human Behavior at Saint Louis University School of Medicine, 1221 South Grand Blvd., St. Louis, MO 63104

# Therapeutic Donor Insemination: Fresh Versus Frozen

Elizabeth M. Barlet, MD and L. L. Penney, MD

**Therapeutic donor insemination is used in the treatment of male factor infertility with the use of cryopreserved semen being the standard of care. We reviewed the therapeutic donor insemination (TDI) program at the University of Missouri. Data from TDI cycles between January, 1985 and October 1988, using fresh semen, were retrospectively reviewed and compared to cycles using frozen semen between November, 1988 and April, 1991.**

**Pregnancy rates were 60% and 49% for fresh and frozen cycles respectively with monthly fecundabilities of 0.10 and 0.086 respectively. These rates are comparable to those achieved in other centers. Additionally, as found in most other TDI programs, analysis reveals no statistically significant difference in fecundability with the use of a fresh specimen over frozen semen.**

The first documented artificial insemination using donor semen is credited to John Dickinson and was performed over a century ago[1]. In 1990, the Office of Technology Assessment reported 30,000 infants conceived in the United States utilizing donor sperm.[2] Today therapeutic donor insemination (TDI) is probably the most successful tool in aiding couples whose infertility is secondary to male factors for which therapy is unavailable or has failed. TDI is utilized in the treatment of azo- or oligospermia, genetic disorders and Rh incompatibility. Prior to 1985, fresh semen was most frequently used, though the first reported use of cryopreserved semen occurred in 1953. Cryopreservation offers several advantages over fresh semen, including ease of scheduling donors and recipients, availability of known quality semen over time, and the ability to obtain several inseminations from one specimen. More importantly; however, cryopreservation allows for quarantining of donor semen to assure a disease-free state.[3]

Due to concern over disease transmission, particularly hepatitis and the human immunodeficiency virus (HIV), the use of cryopreserved semen is now standard of care. Since 1988, the American Fertility Society (AFS) has recommended using only frozen semen for TDI. Guidelines revised in 1990 continue to advocate the use of cryopreserved specimens, quarantined for 180 days, and find no indications for the use of fresh semen as protection for specimen recipients and their offspring.[2] However, several studies show lower pregnancy rates with the use of frozen semen. The cryopreservation of sperm has been shown to produce ultrastructural, morphologic and biochemical changes. Primarily, this is reflected in decreased motility and shorter sperm half-life.[2,4] Most centers report both lower pregnancy rates and fecundability, the monthly chance for conception, but few can show a statistically significant difference between fresh and frozen semen.

In November 1988, the fertility clinic at the University of Missouri adopted the policy of using cryopreserved semen for TDI. The data from cycles using frozen semen since November 1988 were compared to cycles using fresh semen during the 3 years prior (1985-1988). Factors influencing the data, including maternal age and associated female fertility factors were examined. Results from this retrospective review were compared to results quoted in the literature from other centers.

## MATERIALS AND METHOD

Sixty-two patients underwent TDI in our clinic between 1985 and April, 1991. Patients were initially evaluated by extensive history and physical exam, cervica Papanicolaou smear, and cervical screens for gonorrhea and chlamydia. In addition, blood was

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**TABLE 1: Demographic Data**

| | FRESH | FROZEN |
|---|---|---|
| AVERAGE AGE | 28.9 | 30.2 |
| AVERAGE PARITY | 0 | 0.36 |
| DURATION OF INFERTILITY | 2.96 | 2.94 |
| TOTAL CYCLES | 177 | 372 |

**TABLE 2: Pregnancy Rates, Fecundability, Outcome**

| | FRESH | FROZEN |
|---|---|---|
| PREGNANCY RATE | 60% | 49% |
| FECUNDABILITY | 0.10 | 0.086 |
| SAB | 28% | 25% |
| TERM/ONGOING | 72% | 75% |
| CUMULATIVE PREGNANCY RATE AT SIX MONTHS | 48% | 49% |
| CUMULATIVE PREGNANCY RATE AT TWELVE MONTHS | 68% | 56% |
| AVERAGE CYCLES FOR CONCEPTION | 4.55 | 4.28 |
| PREGNANCY RATE, < 30 | 75% | 50% |
| PREGNANCY RATE, > 30 | 33% | 48% |

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obtained for type, Rh and antibody screen, RPR, hepatitis, rubella titer and HIV. Ovulation was documented using basal body temperatures or LH surge testing. The latter method was used more frequently after 1988, thus was more commonly used in the frozen group. In cases of ovulation induction, ultrasound monitoring was used. An endometrial biopsy was performed as indicated. Hysterosalpingogram was recommended to those patients without prior documentation of tubal patency. In some cases this was deferred at the patient's request; however, one was done if conception had not occurred within 6 cycles. Additionally, those patients not conceiving within 6 cycles underwent pelviscopy for evaluation and/or treatment of a peritoneal factor. Ovulation induction was utilized as necessary in those patients known to be anovulatory, and hyperprolactinemia was treated with bromocriptine. Endometriosis was treated surgically or medically as indicated.

Donors between the ages of 20 and 40 were recruited via advertisement, and underwent an extensive evaluation including medical, social and family histories. Initial evaluation of all donors included blood type, Rh and antibody screen, RPR and screens for hepatitis B surface antigen, hepatitis C virus, cytomegalovirus, and HIV. All had urethral swabs for gonorrhea, chlamydia and ureaplasma. All semen specimens were cultured for gonorrhea and underwent analysis for quality. Every six months, screens were repeated for HIV, Hepatitis B and C, RPR, CMV, gonorrhea, chlamydia and ureaplasma.

Fresh specimens were collected on site. Inseminations were performed at midcycle after documentation of ovulation. Semen was placed intracervically on one or two consecutive days. Frozen specimens were also collected on site and were analyzed before cryopreservation. Specimens were frozen in plain glycerol with vapor nitrogen and stored in 0.5 cc aliquots in liquid nitrogen. All were quarantined for 6 months in accordance with AFS guidelines. Specimens were reanalyzed after thawing with each inseminated specimen containing at least 20 million motile sperm. Inseminations were done according to the following protocol: one month intracervically, on the day of the LH surge; the next month intracervically, on the day after LH surge; the next month intracervically, on the day of and after the surge and the fourth month intrauterine, the day after the LH surge. Pregnant and nonpregnant cycles were compared between fresh and frozen semen samples by $\text{Chi}^2$ analyses.

## RESULTS

Of the 62 patients undergoing TDI over the six year period, 18 patients were involved in both the fresh and frozen programs. Seven received only fresh semen and 37 had only frozen inseminations, thus 25 patients received fresh semen and 55 received frozen semen. Comparison of the two groups reveals demographic similarities shown in Table 1.

Outcomes from fresh and frozen inseminations are summarized in Table 2. In those receiving fresh inseminations, 18 pregnancies occurred in 15 women. The pregnancy rate per patient was 60% with a monthly fecundability of 0.10. Of these pregnancies, 28% ended in spontaneous abortion, with 72% ending in known term delivery or with the patients still

**TABLE 3: Comparison of Fresh Semen Rates**

| | PREGNANCY RATES | FECUNDABILITY |
|---|---|---|
| UMC | 60% | 0.10 |
| ALBRECHT | 63.7% | 0.15 |
| AIMAN | 80.0% | -- |
| GLEZERMAN | 85.2% | 0.19 |
| BORDSON | -- | 0.115 |
| RICHTER | -- | 0.189 |
| KEEL | 26.9% | 0.058 |

**TABLE 4: Comparison of Frozen Semen Rates**

| | PREGNANCY RATES | FECUNDABILITY |
|---|---|---|
| UMC | 49% | 0.086 |
| ALBRECHT | 21.0% | 0.048 |
| AIMAN | 57.0% | 0.240 |
| GLEZERMAN | 43.0% | 0.100 |
| BORDSON | 45.0% | 0.102 |
| RICHTER | -- | 0.103 |
| KEEL | -- | 0.050 |

pregnant when returned to the care of their referring physician. Among patients receiving frozen insemination, 32 pregnancies occurred in 27 women. The pregnancy rate per patient was 49% with a monthly fecundability of 0.086, a statistically nonsignificant difference. The spontaneous abortion rate was 25%, with 75% of pregnancies ongoing or ending in delivery of a term infant. One twin pregnancy occurred.

Of women becoming pregnant with fresh insemination, 94% of conceptions occurred within 12 cycles, while 66% occurred within the first 6 cycles. In the frozen group, 97% of conceptions occurred within 12 cycles, with 84% of pregnancies occurring within 6 cycles. The average number of cycles for conception was 4.55 for fresh insemination and 4.28 for frozen insemination.

Male factors necessitating TDI in these patients were examined. The majority of male partners in both groups were azoospermic. In those couples receiving fresh inseminations, 18 of 25 males were azoospermic, for reasons including prior vasectomy, cryptorchidism and previous chemo- or radiation therapy. Azoospermia was present in 36 of 55 males in the frozen group. Oligospermia was present in 5 males in the fresh group and 10 males in those couples receiving frozen semen. Two couples opted for fresh TDI due to genetic etiologies: Klinefelter's and familial Huntington's disease. One couple continued in the TDI program, receiving frozen TDI with an additional patient choosing frozen TDI due to Type IV Ehlers-Danlos syndrome. One patient was Rh isoimmunized and underwent TDI after two affected pregnancies. Five women underwent donor insemination at their own request, with no male partner involvement.

Female factors affected all but 9 women (36%) in the fresh TDI group, and 23 (42%) in the group receiving frozen TDI. These factors included anovulation, endometriosis, severe pelvic adhesive disease, and hyperprolactinemia. In the women in the fresh insemination group, the pregnancy rates were 75% in women under 30, and 33% in patients 30 and older. When grouped by maternal age, with women less than 30 compared to women 30 and older, pregnancy rates were similar in women receiving frozen semen at 50% and 48% respectively.

## DISCUSSION

Several studies have shown a decrease in pregnancy rates and fecundability with use of cryopreserved semen. The rates in our TDI program are comparable to those in the current literature (Tables 3 and 4). In studies using fresh semen only, pregnancy rates range from 26.9% to 85.2%, with monthly fecundability ranging from 0.058 to 0.199. Comparison to studies utilizing frozen semen reveals pregnancy rates from 21-57% and fecundability varying from 0.048 to 0.24.[1,3-10]

Only three studies compare fresh with frozen semen. Keel and Webster reported fecundability rates of 0.058 and 0.048 respectively, finding no statistically significant difference between the two groups. Their research suggests that frozen specimens containing at least 20 million motile sperm produce success rates similar to fresh specimens.[3] Bordson, et al analyzed 400 TDI cycles comparing fecundability of fresh (0.115) and frozen semen (0.103). They found no significant difference between the two groups.[7] Richter, et al utilized the patient as her own control.

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Patients received fresh and frozen specimens from the same donor in alternate cycles over 6 months. With this protocol, the fecundability for fresh semen was 0.189 compared to 0.05 for frozen semen. Thus fresh semen was found three times more effective than frozen.[4] Our data correlate more with that of Keel and Bordson, showing no statistically significant difference in fecundability between fresh and frozen semen.

Among women with no compounding infertility factors, nine received fresh semen. These women conceived eight pregnancies for a fecundability of 0.186%. Twenty three women received frozen semen and had no associated infertility factors. Seventeen pregnancies occurred with a fecundability of 0.14. These rates are higher than for the total population and agree with studies done by Hammond and Albrecht which show higher pregnancy and fecundability rates in women without evidence of reproductive compromise.[5,10]

Our cumulative pregnancy rates at six months (48% and 49%) are comparable to those reported by Keel at 53% for fresh and 62.4% for frozen.[3] Wong reports a cumulative pregnancy rate of 46.8% at 6 months for inseminations using frozen semen, a rate similar to ours (49%). Wong also examined the effect of maternal age on pregnancy rates in women receiving frozen semen. At six months, the cumulative pregnancy rates were 56.5% for women less than 30 and 33.2% for women 30 and older.[9] Our rates at six months showed no marked difference for the two age groups with a pregnancy rate of 48% for women less than 30 and 44% for women 30 and older. However, the spontaneous abortion rates were 20% in those less than 30 and 33% in women over 30.

Therapeutic donor insemination is a viable alternative for couples whose infertility is related to male factors, genetic factors, Rh incompatibility. While fresh semen may be the most optimal choice as it seems to produce higher pregnancy rates, the majority of studies comparing fresh to frozen fail to find a significant difference. In examining the rates for our donor insemination program using frozen, banked semen, our pregnancy rates are lower than previously achieved using fresh semen. Our success rate with fresh semen is somewhat lower than at least some reports cited, probably reflecting the relative lack of refinement in cycle monitoring and timing of insemination when the donors were on call, less expense was involved and success rates were relatively high. Although the overall pregnancy rates appear lower with frozen semen, the monthly per cycle pregnancy rates using fresh or frozen semen are not statistically different. Improvement in cryopreservation techniques may help improve both pregnancy rates and fecundability for frozen semen. Management of compounding female fertility issues will help improve outcome as well. It is our hope that with cumulative experience one of the four timing/method schedules we are currently using will improve even the frozen rate. If all prove equally effective we should at a minimum be able to offer patients the least expensive, least invasive technique.

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## The Authors

Drs. Barlet and Penney are from the Department of Obstetrics and Gynecology at the University of Missouri-Columbia Health Sciences Center in Columbia, Missouri.

**Reprint requests to:**
**L. L. Penney, MD**
**Department of OB/GYN, N625**
**One Hospital Drive**
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# The Etiology of Panic Disorder: A Review of Current Research

Kemal Sagduyu, MD

**During the last decade, there has been extensive research toward understanding the etiology and developing a treatment approach for panic disorder.**

**This is a review and summary of issues related to proposed current biological mechanisms in an attempt to define the etiology of panic disorder. It also emphasizes the need for further studies.**

In the last decade, psychiatrists as well as physicians in other fields of medicine have become more aware of Panic Disorder (PD). It is the most common anxiety disorder among people seeking treatment with a lifetime prevalence of 1.6%.[1,2] Recent findings indicate higher than expected mortality rates in PD patients.[3] The Epidemiologic Catchment Area (ECA) study found that 20% of PD patients had attempted suicide.[2,4]

## ASSOCIATED MEDICAL CONDITIONS

Medical conditions reported to be associated with PD, in consideration of differential diagnosis and possible comorbidity, are very intriguing. One study has reported 58% of PD patients seen in the program had previously unrecognized physical illnesses.[5] Illnesses, which usually appeared to be unrelated to panic attacks, included mild conditions such as iron deficiency anemia, as well as major disorders such as multiple endocrine adenoma or stroke. The possibility that associated medical conditions may trigger PD is interesting not only to investigators in the field but also to patients with PD.[6]

The possibility of the causal relationship between PD and a medical condition should be considered. Both concepts of reverse causality (PD causing physiologic abnormalities) and of a third factor causing both PD and the medical condition (e.g., substance intake) must be examined.[6] For example, chronic alcohol intake, which frequently accompanies PD is shown to associate with increased beta-endophrin levels in spinal fluid and may trigger panic attacks and liver disease concomitantly.[7,8]

Other significant examples are cardiorespiratory changes and disturbances in the hypothalamic-pituitary-adrenal (HPA) axis which have lead to extensive research.

## CARDIAC CHANGES

Ambulatory heart rate recordings confirm the presence of major physiologic changes during self-reported panic attacks.[9] Several authors have shown a correlation between PD and chest pain,[10-12] idiopathic cardiomyopathy,[13] type-A behavior,[14-16] and mitral valve prolapse.[17-20] The correlation of PD with cardiac conditions may be explained by separate, but related studies such as the "noradrenaline hypothesis" and the "lactate induction experiments."

### Noradrenaline Hypothesis

Cocaine, which stimulates noradrenaline (NA) has been shown to induce panic attacks.[21] Since some symptoms of panic attacks (e.g., tachycardia) resemble the symptoms of noradrenaline excess, "Noradrenaline Hypothesis" is an important attempt to find a possible physiologic explanation for PD.[22]

It has been proposed that a noradrenergic "PD circuit" extends from the medullary reticular area to the locus coeruleus, and through the dorsal ascending bundle to the limbic lobe and the prefrontal cortex, and then back to the reticular nuclei of the brainstem, especially the nucleus reticularis gigantocellularis.[23] This has been supported by Positron Emission Tomography (PET) studies, showing increased blood flow in limbic structures and increased right to left ratios of parahippocampal blood flow.[24]

It has been proposed that the parahippocampal abnormality determines vulnerability to panic attacks. Furthermore, it is proposed that a triggering event, such as activation of NA projections to the hippocampal formation causes the abnormal region to initiate an anxiety attack by way of septo-amygdalar complex and its sequential projections.[24]

There are, however, contradictory findings. It has been also shown that the beta adrenergic response is not only increased, but in some cases decreased in patients with PD.[25] Several mechanisms have been proposed to explain this.

One explanation is that receptor down-regulation is due to chronically increased adrenergic function. Another suggestion is that dysfunction of the alpha-2-adrenergic autoreceptor and other neuronal inputs cause panic attacks.[26]

Increased sensitivity to augmented NA function has also been suggested, indicating that impaired presynaptic NA neuronal regulation could exist in patients with frequent panic attacks.[26] Another study suggests an uncoupling between alpha-2-NA and prostaglandin-E (PG-E) and perhaps serotonin output.[27] While NA and prostaglandin can be related to the cardiac mechanisms, serotonin is controversial, since studies have shown that serotonin agonists[27] as well as lactate induced serotonin depletion[28] may lead to panic attacks.

### Lactate Induction Experiments

Physiological responses mimicking panic attacks can be elicited by lactate-infusion. The mechanism of lactate's effect is as yet undetermined despite intense research efforts and the development of numerous theories regarding the basis of lactate-induced panic.

These theories include increased beta adrenergic activity, stimulation of the locus coeruleus and brainstem nuclei, altered oxidation-reduction state in the ventral medulla, enhancement of an aerobic metabolic defect, and increased awareness and fear of psychophysiological changes resembling panic in patients with PD. Lactate infusion was shown to increase heart rate, systolic blood pressure, blood lactate, pyruvate, bicarbonate, and prolactin, and decrease blood cortisol, pC02, calcium and phosphorus.[29-33]

Caffeine has been shown to produce significantly greater levels of lactate and cortisol.[26] It has been suggested that caffeine may be facilitating or causing panic disorder through adenosine receptor blockade,[33] however it may also be causing panic attacks via lactate induction.

These findings and theories are giving strong clues for the correlation of PD with cardiac and physiologic changes. Lactate induction studies followed by other chemical induction studies have brought up new proposed mechanisms of PD etiology.

## RESPIRATORY CHANGES

The earliest contributions to the data endorsing physiologic changes document a higher oxygen consumption by the human brain associated with the state of anxiety or apprehension.[34]

It has been reported that carbon dioxide and oxygen mixture inhalation produces panic symptoms. The anxiogenic C02 effect diminishes as the amount of C02 exposure increases.[30] This data supports a behavioral account of the effects of anxiogenics and even suggests the possibility of anxiogenics (such as C02) being anxiolytic.

In one study, PD patients demonstrated a significant delay in recovery of pC02 after hyperventilation when compared to the controls.[35] This finding points to a basic difference in respiratory physiology in PD patients characterized by a disruption of the normal negative feedback of hypocapnia to respiratory drive. This finding could represent a biological marker for PD.[35]

Both C02 and hyperventilation can produce panic symptoms by alternatively acting at different sites. PD may involve a defect in cellular aerobic metabolism, resulting in cellular hypoxia. Hyperventilation can cause or exacerbate cellular hypoxia since alkalosis shifts the oxyhemoglobin dissociation curve to the left (Bohr effect) and hypophosphatemia decreases levels of 2,3-diphosphoglyceric acid. Carbondioxide on the other hand, may act by stimulating central NA neurons.[31,36,37]

An alternative explanation could be that PD patients have different sensitivities to CO2, which suggests that there are "types" of PD.[38]

## HYPOTHALAMIC-PITUITARY-ADRENAL SYSTEM

The hypothalamic-pituitary-adrenal (HPA) system has been at the center of interest of PD researchers for a number of years.[39-44] The best proven abnormality has been elevated basal levels of cortisol.[42] A distur-

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bance in one or more feedback mechanisms in the HPA (mainly the adrenergic) system appears to be a potential explanation for all peripheral cardiorespiratory changes and many symptoms of PD.

Lower mean thyroid stimulating hormone (TSH) and prolactin responses have been found in a group of PD patients.[45] One study on baboons[44] has shown that stress-induced secretion of beta-endophrin by several organs suppresses the hypothalamic secretion of the luteinizing hormone releasing hormone (LHRH). This leads to several physiologic changes. In addition, the high basal cortisol levels in stressed baboons place them at higher risk for atherosclerosis because of decreased levels of circulating high density lipoprotein (HDL) cholesterol. This signals increased vulnerability to atherosclerotic changes in the central nervous system (CNS) and other organs directly induced by stress and anxiety.

## CONCLUSION

The increasing interest of researchers and clinicians for PD is reflected by the wide variety of recent study and publications. The new data from recent studies has produced more questions. Many studies had limited size and are inappropriate for drawing reliable, generalized theories. The past research was done retrospectively, concentrating on the population which has presented to psychiatrists rather than the much larger population of patients that present to primary care and emergency physicians. Few studies examined PD in unscreened populations. In addition, no causal mechanism for PD has been shown in-vivo.

Panic Disorder is fertile ground for future research. There is a great need for multicenter studies involving populations larger enough to have significant, valid and reliable results. These studies will give more credible results by using unscreened populations. There also is a need to develop methods to distinguish the acute anxiety reactions occurring in normal individuals from true panic disorder.

Current research is beginning to elucidate important interactions between cardiorespiratory systems and the HPA system, and the dynamic roles of various chemicals including noradrenaline, lactate and beta-endophrins which produce symptoms of PD. A better understanding of biochemical and biopsychosocial dynamics of PD will certainly lead to more specific treatments, and medications with a higher efficacy, and a lower side effect profile for the next generation of PD patients.

A biochemical test and genetic counseling for PD when available would help us to identify the vulnerable population. We could then apply preventive measures or treatment before the occurrence of progressive deterioration in the order of limited symptom attacks, panic attacks, depression, social isolation and debilitation.

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## Acknowledgment

Appreciation is expressed to Stephen R. Dager, MD, of Harborview, Seattle, Washington, David Govaker, MD, of San Bernardino, California, and Stuart Munro, MD, of the University of Missouri, Kansas City, Missouri, for their support.

## The Author

Dr. Sagduyu is a staff psychiatrist at ARH Medical Center in Hazard, Kentucky. He prepared this paper during his residency at the University of Missouri-Kansas City.

**Reprint requests to:**
**Kemal Sagduyu, MD**
**Appalachian Regional Healthcare**
**Department of Psychiatry**
**102 Medical Center Drive**
**Hazard, Kentucky 41701**
**tel: (606)439-1331, ext. 5950**

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## University of Missouri-Kansas City

**Fred Defeo, MD,** assistant professor of internal medicine, is the 1994 president-elect of the Metropolitan Medical Society of Greater Kansas City. Dr. Defeo has served as president of the society's foundation, treasurer, and chairman of the Publications Committee and the Scouting Committee.

**Richardson K. Noback, MD,** the medical School's founding dean, was the recipient of the 1993 Special Recognition Award from the Missouri Society of Internal Medicine.

**Marjorie S. Sirridge, MD,** received the 1993 Merit Award from the Metropolitan Medical Society. It is the society's top honor recognizing career achievement.

The school of medicine will be a key participant in establishing and directing the Missouri Addiction Personnel Training Center. UMKC received a grant from the Center for Substance Abuse Treatment to establish on of 11 such addiction personnel training centers nationwide. The center's program will emphasize pre-employment training of health care workers for nonprofit and public substance abuse treatment and recovery programs.

## University of Missouri-Columbia

**Bernard Ewigman, MD,** associate professor of family and community medicine, and researchers from the U.S. Centers for Disease Control and Prevention published a study ranking regions of the country for the incidence of maltreatment deaths in children 4 and under. Among twelve states in the Northern Central region, Missouri ranks third highest after Illinois and South Dakota. St. Louis has the 10th highest frequency of abuse and neglect deaths and Kansas City the 12th highest among 39 cities. Work by Dr. Ewigman and Dr. Coleen Kivlahan, director of the Missouri Department of Health, led to major reforms in the way children's injury-related deaths are investigated in Missouri, putting into place the nation's most comprehensive child fatality review system.

**Steven C. Zweig, MD,** associate professor of family and community medicine has been appointed to the Missouri Governor's Advisory Council on Aging.

**Philip C. Anderson, MD,** professor and director of the division of dermatology, has been elected to a four-year term on the Sulzberger Institute for Dermatologic Education board of trustees.

**Elizabeth Garrett, MD,** associate professor of clinical family and community medicine was one of 31 participants in the U.S. Public Health Service's 1993 Primary Care Policy Fellowship program in Washington, D.C. During the three-week fellowship, participants studied primary-care policy development, including the legislative, research and finance processes, in order to become effective advocates for improving primary health care at all levels of government.

Researchers from the MU department of internal medicine had 38 papers peer-reviewed and selected for presentation recently at the 66th annual meeting of the Central Society for Clinical Research in Chicago. This put MU among the top five programs represented at the meeting.

## Washington University

**Susan Mackinnon, MD,** professor of plastic and reconstructive surgery, has developed a donor nerve transplant technique that works for people with traumatic nerve damage in their extremities. Dr. Mackinnon performed the first transplant in the United States and only the second to be performed in the world, late September 1993 on a 12-year-old boy whose left leg was mangled in a lawnmower accident. The transplant already has spurred the growth of the boy's own nerves.

**Steven J. Weintraub, MD,** instructor of medicine, received at five-year grant from the National Cancer Institute for a research project titled, "The Transcription Factor E2F and Cell Cycle Control."

The Department of Psychiatry will conduct workshops to train and consult with community leaders from areas affected by the flood of 1993. A grant from the McDonnell Foundation if funding Project CREST (Community Resource for Education, Support and Training).

# NEW MEMBERS

❖ **Kenneth A. Adams, MD,** Suite 306, 1515 W. Truman Rd., Independence, MO 64050, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Adams received his medical degree at Washington University in 1989. He completed his residency at the University of Tennessee Medical Center, Memphis. Dr. Adams specializes in obstetrics and gynecology.

❖ **Shahabul S. Arfeen, MD,** MA436 Health Sciences Center, 1 Hospital Drive, Columbia, MO 65212 has become a member of the Boone County Medical Society. Dr. Arfeen received his medical degree at Sind Medical College, University of Karachi, Karachi, Pakistan, in 1980. He completed his residency at University Hospital & Clinics, Columbia, MO. Dr. Arfeen specializes in internal medicine.

❖ **Michael J. Bolger, MD,** 3015 N. Ballas, St. Louis, MO 63131, has become a member of the Missouri State Medical Association. Dr. Bolger received his medical degree at Washington University in 1981. He completed his residency at North Carolina Memorial Hospital, Chapel Hill, NC. Dr. Bolger specializes in internal medicine, oncology and hematology.

❖ **Keith A. Brown, MD,** 3009 North Ballas Rd., Bldg. 1 #227, St. Louis, MO 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Brown received his medical degree at the University of California, San Diego, in 1983. He completed his residency at Stanford University and fellowship at the Medical College of Wisconsin. Dr. Brown specializes in psychiatry.

❖ **Roy J. Elfrink, MD,** 2303 S. 5 Hwy., Suite 100, Marshall, MO 65340, has become a member of the Saline County Medical Society. Dr. Elfrink received his medical degree at the University of Missouri-Columbia in 1987. He competed his residency at the University of Missouri-Columbia. Dr. Elfrink specializes in general surgery.

❖ **Brian K. Ellefsen, DO,** 1515 Hazel St., Carthage, MO 64836, has become a member of the Jasper County Medical Society. Dr. Ellefsen received his doctor of osteopathy at University of Health Sciences, Kansas City, MO, in 1988. He completed his residency at Deaconess Medical Center, St. Louis. Dr. Ellefsen specializes in orthopedic surgery.

❖ **Bryan E. Flueckiger, MD,** 6400 Clayton Rd., Suite 412, St. Louis, MO 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Flueckiger received his medical degree at Southern Illinois University in 1981. He completed his residency at Milton S. Hershey Medical Center, Hershey, PA. Dr. Flueckiger specializes in psychiatry.

❖ **Thomas E. Hafer, MD,** Suite 101, 17053 Hwy 71 South, Belton, MO 64012, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hafer received his medical degree at the University of Missouri-Columbia in 1979. He completed his residency at Wilson Hospital, Johnson City, NY. Dr. Hafer specializes in internal medicine.

❖ **Kelly M. James, MD,** #402, 1515 W. Truman Rd., Independence, MO 640505, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. James received his medical degree at Albert Einstein College of Medicine-Yeshiva University, Bronx, NY, in 1987. He completed his residency at University Hospital-Suny Stony Brook, NY. Dr. James specializes in general surgery.

❖ **Marvin O. Kolb, MD,** 2401 Gillham Rd., Kansas City, MO 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Kolb received his medical degree at Creighton University in 1965. He completed his residency the Mayo Graduate School of Medicine, Rochester, MN. Dr. Kolb specializes in general pediatrics.

❖ **Danielle Landman, MD,** 7426 Chamberlain, University City, MO 63130, has become a member of the Missouri State Medical Association. Dr. Landman received her medical degree at St. Louis University in 1988. She completed her residency at St. John's Mercy Medical Center, St. Louis. Dr. Landman specializes in internal medicine.

❖ **Eleanor A. Lisbon, MD,** Suite 202, 930 Carondelet, Kansas City, MO 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Lisbon received her medical degree at Howard University in 1990. She completed her residency at the University of Kansas Medical Center. Dr. Lisbon specializes in family practice.

❖ **Mark H. Loeb, MD,** 1506 E. Broadway, Columbia, MO 65201, has become a member of the Boone County Medical Society. Dr. Loeb received his medical degree at the University of Missouri-Columbia in 1988. He completed his residency at Hennepin County Medical Center, Minneapolis. Dr. Loeb specializes in family practice.

❖ **Dwight C. Look, III, MD,** 1500 Fournier Dr., St. Louis, MO 63126, has become a member of the Missouri State Medical Association. Dr. Look received his medical degree at the University of Missouri-Kansas City in 1985. He completed his residency at the University of Colorado Health Sciences Center and fellowship at Barnes Hospital. Dr. Look specializes in pulmonary diseases.

❖ **Gerald P. McManama, MD,** 12255 DePaul Dr., Suite 670, Bridgeton, MO 63044, has become a member of the St. Louis Metropolitan Medical Society. Dr. McManama received his medical degree at Johns Hopkins in 1980. He completed his residency at Barnes Hospital and fellowship at the University of Missouri-Columbia. Dr. McManama specializes in general and vascular surgery.

❖ **Leonard N. Newmark, MD,** 777 S. New Ballas Rd., St. Louis, MO 63141, has become a member of the Missouri State Medical Association. Dr. Newmark received his medical degree at Washington University in 1963. He completed his residency at Jewish Hospital of St. Louis. Dr. Newmark specializes in internal medicine.

❖ **James B. Pitt, DO,** Parkway Center, Suite 108, Osage Beach, MO 65065, has become a member of the Lake of the Ozarks County Medical Society. Dr. Pitt received his doctor of osteopathy at Kirksville College of Osteopathic Medicine, Kansas City, in 1988. He completed his residency at Kirksville Osteopathic Medical Center. Dr. Pitt specializes in general surgery.

❖ **Stephen A. Schaefer, MD,** 1015 S. Grant St., Marshall, MO 65340, has become a member of the Boone County Medical Society. Dr. Schaefer received his medical degree at St. Louis University in 1979. Dr. Schaefer completed his residency at the Cook County Hospital, University of Illinois and fellowship at the University of South Florida, Tampa. Dr. Schaefer specializes in general and vascular surgery.

❖ **Stanley P. Sharp, MD,** 8800 Blue Ridge Blvd., Kansas City, MO 64138, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Sharp received his medical degree at the University of Kansas in 1980. He completed his residency at St. Luke's Hospital. Dr. Sharp specializes in internal medicine.

❖ **Steven R. Shields, MD,** 1755 S. Grand Blvd., St. Louis, MO 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Shields received his medical degree at the University of Mississippi in 1984. He completed his residence at Duke University Medical Center and fellowship at Harvard. Dr. Shields specializes in ophthalmology.

❖ **James R. Slaughter, MD,** Dept. of Psychiatry and Neurology, 1 Hospital Drive, Columbia, MO 65212, has become a member of the Boone County Medical Society. Dr. Slaughter received his medical degree at the University of Missouri-Columbia in 1977. He completed his residency at University Hospital & Clinics, Columbia, MO. Dr. Slaughter specializes in psychiatry and neurology.

❖ **Steven L. Solomon, MD,** 3009 N. Ballas Rd., Suite 131, St. Louis, MO 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Solomon received his medical degree at the University of Chicago Pritzker School of Medicine, in 1985. He completed his residency at the Mallinckrodt Institute of Radiology, Washington University. Dr. Solomon specializes in radiology.

❖ **Vanaja R. Thondapu, MD,** 2501 Carnation Dr., Columbia, MO 65202, has become a member of the Boone County Medical Society. Dr. Thondapu received her medical degree at Osmania Medical College, Osmania University, Hyderabad, A P, India in 1982. She completed her residency at Meridia Huron Hospital, Cleveland, OH. Dr. Thondapu specializes in internal medicine.

❖ **Thuy-Lieu T. Vo, MD,** 2040 Concourse Dr., St. Louis, MO 63146, has become a member of the St. Louis Metropolitan Medical Society. Dr. Vo received her medical degree at Washington University in 1985. She completed her residency and fellowship at Washington University. Dr. Vo specializes in pathology.

❖ **Donald J. Voelker, MD,** Div. of Cardiology, 1 Hospital Drive, Columbia, MO 65212, has become a member of the Boone County Medical Society. Dr. Voelker received his medical degree at the American University of the Caribbean School of Medicine, Plymouth, Montserrat in 1983. He completed his residency and fellowship at St. Luke's Hospital, Chesterfield, MO. Dr. Voelker specializes in cardiovascular diseases.

❖ **Theodore E. Wills, MD,** Dept. of Ophthalmology, 1 Hospital Drive, Columbia, MO 65212, has become a member of the Boone County Medical Society. Dr. Wills received his medical degree at the University of Nebraska, Omaha, in 1955. He completed his residency at the Oregon Health Science University Hospital, Portland. Dr. Will specializes in Ophthalmology.

### STUDENTS

*University of Missouri-Kansas City*
Reghu Nayar

# CME CALENDAR

**The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send CME information for listing in *MISSOURI MEDICINE*. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.**

## February

**14 - *St. Louis*: 8th Annual Daniel R. Biello Memorial Lecture: Henry D. Royal, MD - Pulmonary Embolism: Scientific Challenges.** Contact R. Gilbert Jost, MD, Mallinckrodt Institute of Radiology, 314/362-7130.

**15 - *Kansas City*: Perinatal Core Curriculum Workshop #3.** 5 credit hours. Contact Carol Osborne, St. Luke's, 816/932-3737.

**26 to March 5 - *Barbados*: Topics in Gastroenterology and Internal Medicine.** 15 credit hours. Contact Maria Gorrick, George Washington University, 202/994-4285.

## March

**1 - *Kansas City*: Perinatal Core Curriculum Workshop #4.** 5 credit hours. Contact Carol Osborne, St. Luke's Hospital of K.C., 816/932-3737, fax - 816/932-5119.

**1 & 2 - *St. Louis*: Transesophageal Echocardiography.** 13 credit hours. Contact Dianne Reid, 314/577-8897.

**4 - *Denver, CO*: Frontiers in Ovulation Induction.** Contact Washington University 314/362-6893 in Missouri, 800/325-9862 interstate, fax 314/362-1087.

**4 & 5 - *St. Louis*: The Annual Meeting of the Midwest Gut Club.** Contact the St. Louis U., 314/577-8167 or 800/553-2712.

**6 to 11 - *Vail, CO*: Update in Clinical Medicine.** 19 credit hours. Contact Steven Smith, George Washington University, CME, 202/994-4285, fax 202/994-1791.

**7 to May 23 (Monday evenings) - *St. Louis*: Internal Medicine Review.** Contact Washington University 314/362-6893 in Missouri, 800/325-9862 interstate, fax 314/362-1087.

**9 - *St. Louis*: Updates in Gastroenterology.** 4 credit hours. Contact St. John's Mercy Medical Center, 314/569-6290.

**10 & 11 - *St. Louis*: Gastrointestinal Surgery: Refresher Course and Update.** Contact CME, Washington University, 314/362-6893 in MO or 800/325-9862 interstate.

**11 - *Kansas City*: What's New in Diabetes.** 5 credit hours. Contact The Ed Bixby Institute, 816/276-4306, 800/892-5771 ext. 4306 in MO, 800/821-5140 ext. 4306 for bordering states.

**14 - *St. Louis*: City-Wide Radiology Conference: Theresa McLoud, MD - Computed Tomography of the Pulmonary Parenchyma.** Contact R. Gilbert Jost, MD, Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 314/362-7130.

**15 - *Kansas City*: Perinatal Core Curriculum Workshop #5.** 5 credit hours. Contact Carol Osborne, St. Luke's Hospital of K.C., 816/932-3737, fax - 816/932-5119.

**17 to 19 - *St. Louis*: Microsurgery of the Temporomandibular Joints.** 20 credit hours. Contact the St. Louis University, CME, 314/577-8167 or 800/553-2712.

**17 to 19 - *St. Louis*: The Fifth International Vaginal Surgery Conference.** Contact Patricia Kovac, 314/991-0441.

**18 - *St. Louis*: Asthma.** Contact Washington University 314/362-6893 in MO, 800/325-9862 interstate, fax 314/362-1087.

**18 - *St. Louis*: Laboratory Monitoring of Antithrombotic Therapy.** 7 credit hours. Contact the St. Louis University 314/577-8167 or 800/553-2712.

**18 & 19 - *St. Louis*: Laparoscopy Ultrasound.** Contact Washington U. 314/362-6893 in MO, 800/325-9862 interstate.

**18 - *Washington D.C.*: Ultrasound in Abdominal Surgery.** Contact Maria Gorrick, George Washington U. 202/994-4285.

**24 - *St. Louis*: Neonatal Pharmacology.** 6.75 credit hours. Contact Patricia Nash, St. Louis University, 314/577-5631.

**24 & 25 - *St. Louis*: Advanced Applications in Endoscopic Neurosurgery.** 14 credit hours. Contact St. Louis University, CME, 314/577-8167, or 800/553-2712.

**25 & 26 - *Springfield*: Pediatric Advanced Life Support Provider Course.** 16 credit hours. Call 417/885-4117.

**26 - *St. Louis*: Molecular & Medical Genetics in Clinical Practice.** Contact Washington University 314/362-6893 in Missouri, 800/325-9862 interstate, fax 314/362-1087.

**30 - *St. Louis*: Updates in Ophthalmology for the Non-Ophthalmologist.** 4 credit hours. Contact St. John's Mercy Medical Center, 314/569-6290.

## April

**7 to 10 - *Kansas City*: The 136th MSMA Annual Convention.** A wide variety of CME. Contact MSMA, 314/636-5151.

**8 - *Philadelphia, PA*: Frontiers in Ovulation Induction.** Contact Wash. U. 314/362-6893 in MO, 800/325-9862 interstate.

**8 to 10 - *Tan-Tar-A, Osage Beach, MO*: Mental Health & Aging: Anxiety & The Older Adult.** 12.5 credit hours. Contact Jane Colt, St. Louis University, 577-8726.

**9 & 10 - *Chicago, IL*: National Kidney Foundation Third Annual Spring Clinical Nephrology Meetings, Primary Care Nephrology Program.** 10 credit hours. Call 1-800-622-9010.

**9 to 11 - *Washington D.C.*: Workshop on Stress Echocardiography.** 13 credit hours. Contact Beth M. Paul, St. Luke's Hospital of K.C., 816/932-2301, fax 816/932-5119.

**11 - *St. Louis*: City-Wide Radiology Conference, St. Louis University.** Contact R. Gilbert Jost, MD, Mallinckrodt Institute of Radiology, 314/362-7130.

**19 - *Kansas City*: Perinatal Core Curriculum Workshop #7.** 5 credit hours. Contact Carol Osborne, St. Luke's, 816/932-3737.

**21 & 22 - *St. Louis*: Symposium on Obstetrics & Gynecology.** Contact Wash. U., 314/362-6893 in MO, 800/325-9862 interstate.

**21 to 24 - *St. Louis*: Advanced Microsurgery of the Lumbar and Cervical Spine.** 28 credit hours. Contact the St. Louis University, CME, 314/577-8167 or 800/553-2712.

**23 - *St. Louis*: Infectious Diseases.** Contact Washington University 314/362-6893 in MO, 800/325-9862 interstate.

**25 to 29 - *St. Louis*: The Medicolegal Death Investigator Training Course.** 33 credit hours. Contact Mary Fran Ernst, St. Louis University, 314/522-6410, ext. 6509.

**26 to 28 - *St. Louis*: Color-Flow Doppler Echocardiography.** 20 credit hours. Contact Dianne Reid, St. Louis U, 314/577-8897.

**28 & 29 - *Overland Park, KS*: Current Management In Critical Care.** Contact Linda Smutz, Kansas City Southwest Clinical Society, 816/523-3383.

**29 - *St. Louis*: Oculoplastic and Facial Plastic Surgery Workshop.** 8 credit hours. Contact Kerry Assil, MD, St. Louis University, 314/865-8333.

# PHYSICIAN RECOGNITION AWARDS

**The Physician Recognition Award is presented by the Missouri State Medical Association and the American Medical Association to physicians who voluntarily complete 150 hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.**

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4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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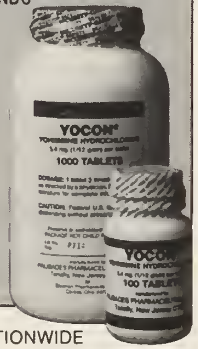

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- ☐ Managing Physician Practice Patterns
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# Health System Reform, Smoking, and You

J. Regan Thomas, MD, Editor

Health System Reform continues to be debated and argued, encouraged or debunked, supported or resisted. One area, however, where there seems to be consensus (at least with physicians), is that a key preventative health step that could provide real cost containment, relates to decreasing tobacco use. Thomas Houston, MD, the AMA director of preventative medicine and public health has stated, "you can't approach health system reform without considering that tobacco costs the system $100 billion a year. You can't consider cost containment without considering the sources of those costs."[1] He hopes the debate over the health system draws more attention to disease prevention and health promotion, and accordingly greater attention to the effects of tobacco.

Tobacco related disease represents one of America's greatest health problems. About 460,000 people die each year from tobacco-related causes according to AMA figures. That would make it more deadly than all other preventable, premature causes of death combined.

Although some improvement has been made in decreasing smoking with some groups, the situation with children and adolescents remains alarming. Three thousand children start smoking every day. Statistically, one thousand of them will die from smoking. Many more children are put at risk from exposure to secondhand smoke. Children who smoke typically have a number of factors that encourage them to do so. Those factors include smoking by parents and siblings, school problems, adolescent peer pressure issues, and not infrequently, participation in other high risk behaviors.

The numbers evolved here are staggering and seemingly impossible for us to correct as individuals. Like many similar situations, perhaps the best we can do is to influence our own individual practices and patients. The National Cancer Institute estimates that if 50% of primary care physicians succeeded in smoking cessation of 10% of their smoking patients, there would be 2 million fewer smokers each year.

The responsibility should not just be with our primary care colleagues. All of us can educate and support smoking cessation within our practice regardless of specialty. It's not an easy task. Realistically a success rate of 15% to 20% is pretty good. One thing is sure, if you don't try, it is going to be less. Also, don't underestimate the influence your efforts will have. Having a suggestion (and psychological support) to stop smoking by their physician is a significant factor in several studies of successful "quitters."

The AMA recently worked with an expert panel to develop suggestions to help your patients through your office. They developed the "Five-A's" as part of an individualized practice program to stop smoking. The "Five-A's" are:

| | |
|---|---|
| ASK - | **Ask every patient if they smoke (or use tobacco in any way).** |
| ADVISE - | **Take a minute to urge all smokers to stop and review the reasons why.** |
| ASSIST - | **Provide motivational and self-help materials and "moral support."** |
| ARRANGE - | **Set up follow-up visits to encourage success and prevent relapse.** |
| ANTICIPATE - | **Be ready with a prevention strategy for adolescent non-smokers.** |

It is easier than you may think. Your involvement may make a difference for many of your patients. Every individual success contributes to a real and tangible improvement in health care for your community. Health System Reform debate rages on. It is nice to know we really can accomplish something meaningful in the meantime. ■

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1. Anti-Smoking Group Gives Government Bad Grades. *American Medical News* February 7, 1994; 14.

## LETTERS TO THE EDITOR

Dear Editor:

Dr. Morris' letter, "Under the Eyes of the Board, My Story," is right on the mark. It is almost identical to my story except mine began in 1988. I had to practice without a BNDD or DEA license for 2 $^1/_2$ years, and I was not given the opportunity for a hearing before the medical review board even though I begged for one.

Dr. Morris' punishment has just begun as he will find out over the next three years. The list of possible horrors is long. Insurance companies may drop his contract without true explanation or recourse. His partners may come under the watchful eye of the Board of Healing Arts. Rumors of drug or alcohol addiction may surface. Many of his patients may not understand and come to doubt their physician, resulting in the loss of trusting relationships. Pharmacists may inadvertently fill a prescription for a narcotic without his permission because his name is in the pharmacy's computer as that patient's primary care physician and he had previously prescribed that medication.

He may have to appear before ad hoc boards of his peers at nursing homes, hospitals, and insurance companies to explain what happened. Only the people who know him best and the high quality of medicine he has practiced for thirty years may allow him an opportunity to explain. They will probably shake their heads in disbelief and kept asking over and over again, "What more is there to this to warrant such severe punishment?" The answer will always be the same, "Nothing." He may write to various elected officials, professional organizations, and other colleagues, each time enclosing a 12 page report of what happened. They will probably react with disbelief and ask what more is there to this.

The list goes on, as one can imagine, but the most unlikely occurrence will probably be the most likely to happen. I can speak with some knowledge about what might happen to Dr. Morris because of my own experiences during a BHA probation period.

Officers from the BHA came to my office without notice and stating that I had been prescribing controlled substances without a license. They presented my treatment of six patient as evidence.

I showed the officers a copy of PDR to prove that four of these prescriptions did not involve controlled substances. I also explained that I had never seen one of the patients and the sixth was prescribed by one of my partners. A waiting room full of other patients had to wait while this was accomplished.

Later, more BHA officers come to my office and stated again that I had been prescribing without a license. I restated that to my knowledge I was not prescribing controlled substances. Again my patients had to wait. I learned from a local pharmacist that DEA officers had been to all the pharmacies in my area and had all of my prescriptions pulled for the last eighteen months. Two weeks later the BHA officers returned to my office with a subpoena for 44 office records.

I was called to appear before the BHA for a hearing on an alleged probation violation. The hearing lasted for nine hours. The BHA was not able to produce any evidence that I had violated my probation.

Four months later a decision was delivered to my attorney from the BHA. The decision said that none of the witnesses were credible. My BNDD and DEA licenses were reinstated, but my license to practice medicine was suspended for 30 days, and my probation extended for two years.

My attorney petitioned for a stay and removal to circuit court. This was granted.

A Petition for Judicial Review, Declaratory Judgement, and Temporary and Permanent Injunction was filed on my behalf against the BHA in the Circuit Court. The petition stated that the Board's disciplinary order to suspend and place on probation my license to practice as a physician and surgeon in the State of Missouri was unlawful; was unsupported by competent and substantial evidence upon the whole record; was made and entered in excess of the Boards statutory authority or jurisdiction; was made upon unfair, unlawful and improper procedure and without a fair trial; involved an abuse of discretion; was arbitrary, capricious or unreasonable; was in violation of constitutional principles; was contrary to law in the following respects:

(a) The Board is without statutory authority or jurisdiction to place a license to practice medicine on probation pursuant to agreement in that said agreement is not based upon an independent determination by the Administrative Hearing Commission that cause existed to discipline a physician's license, as required by 621.045, RSMo. Further, the utilization of said agreement without an independent finding of cause by the commission constitutes the application of agency policy contrary to reasonable interpretation. and construction of the rules and law governing agency action.

(b) The Board was without jurisdiction and acted in excess of its authority in conducting its own evidentiary hearing to determine whether there had been a violation of the terms and conditions of a probation and, if so, what additional disciplinary action, if any, should be ordered and imposed.

The Disciplinary Agreement was advocated by the Board under 334.100.2 and 334.120 RSMo., to settle contested cases without resorting to filing a formal complaint in the Administrative Hearing Commission. Resort to such procedures is not mentioned or contemplated by Chapters 334, 536, or 621, RSMo., or 1 CSR 15-2.450(1). Further, the procedure utilized by the Board to prosecute and dispose of alleged disciplinary violations by the use of a stipulated agreement is in derogation of 621.045, RSMo., which requires the board to file a complaint in the Administrative Hearing Commission and requires the Commission to make an independent evidentiary finding that cause exists to discipline a licensee. The Board is without jurisdiction to enter into such an agreement. Moreover, said agreement fails to specify facts that constitute cause for discipline and the agreement does not constitute a voluntary waiver of a physician's right to a hearing on facts that would support the imposition of discipline. The bare recital of legal conclusions in the agreement provides no record for judicial review.

The Disciplinary agreement is unlawful and unconstitutional; is not supported by competent and substantial evidence upon the whole record; was made and entered in excess of the Board's jurisdiction and statutory authority; was made upon unfair and improper procedure without a fair trial; is contrary to law and is based upon improper construction and application of Chapters 334, 536, and 621, RSMo.

Said agreement is not enforceable by virtue of any authority granted to the Board under reasonable construction of the Constitution of Missouri or statutes of the State of Missouri. It is the policy of the Board to expedite its disciplinary actions against licensees by proceeding with such agreements to avoid affording licensees due process as required by 334.100.2, 334.240.621/045 and Chapter 536. RSMo. The above is done in clear violation of the law and any agreement entered pursuant to this procedure is void and unenforceable.

On September 15, 1993 the case against the Missouri State Board of Healing Arts was heard before the court system. On October 21, 1993, the Circuit Court judge having reviewed and considered the pleading, the stipulation of facts and the arguments of the parties, declared the rights of the parties and found that the "Agreement between the State Board of Registration for the Healing Arts and Gary Bodenhausen, MD, Regarding Discipline of the License of Gary Bodenhausen, MD to Practice the Healing Arts," was made and entered into in excess of the jurisdiction and statutory authority of the Board of Registration for the Healing Arts and is, therefore, void ad initio in that the Board did not obtain an independent evidentiary finding of cause for the Administrative Hearing Commission to discipline petitioner's license prior to execution of the aforementioned disciplinary agreement, as required by 621.045, RSMo. The Court further declares that said disciplinary agreement was made upon unfair and improper procedure and is the application of agency policy contrary to reasonable construction of the rules and laws governing respondent's activities. The Court further finds the respondent is without jurisdiction to attempt to impose additional discipline upon petitioner by way of a "probation violation" where the underlying basis for the violation is the aforementioned disciplinary agreement which is void ad initio.

This again was upheld in the same court on January 6, 1994

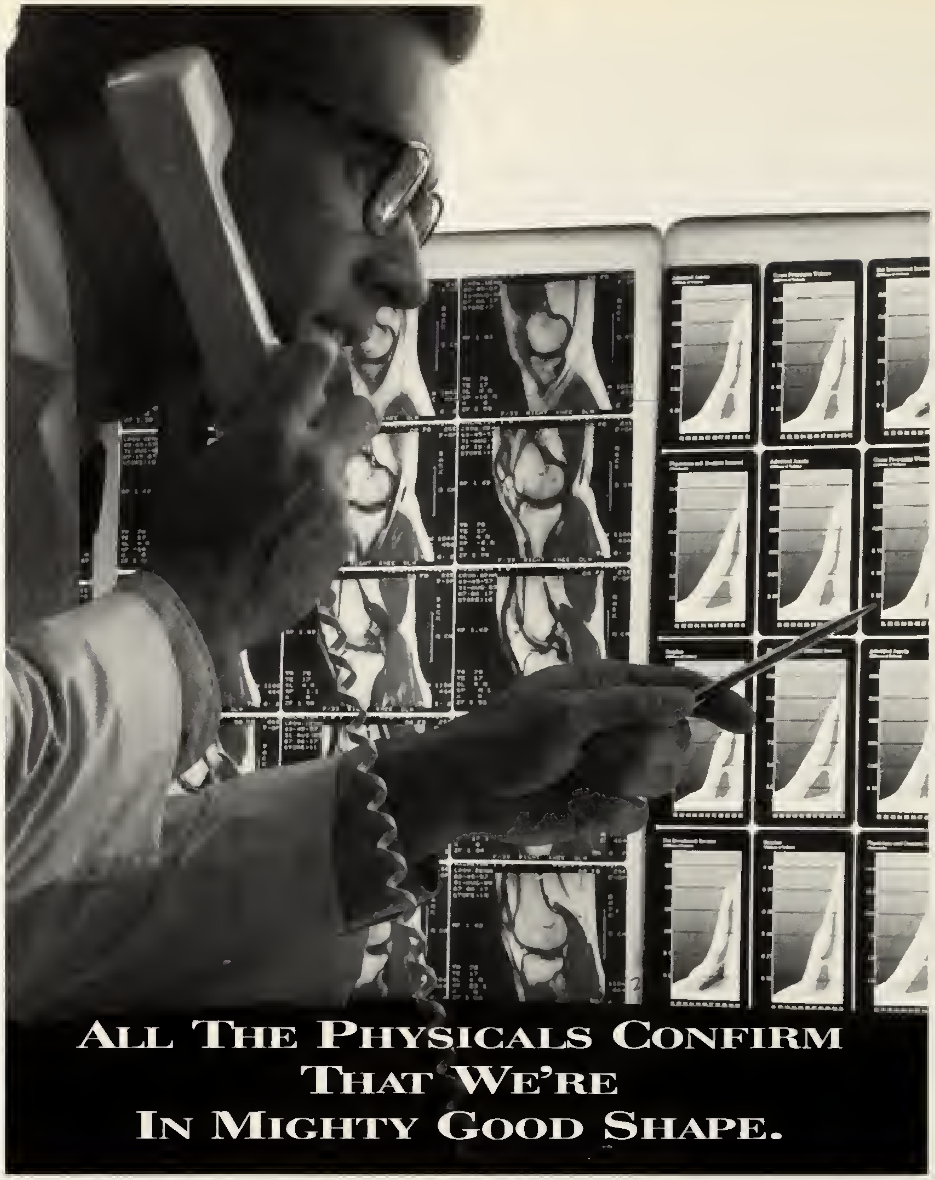
The Missouri State Board of Registration for the Healing Arts Disciplinary Agreements are illegal.

On January 6, 1994 the BHA convinced Representative Joe Treadway to introduce House Bill 1208 relating to administrative procedures for certain contested cases, with an emergency clause. This bill is designed very cryptically to keep the Board as a judge, jury, and prosecutor. This bill will violate the basic rights of all professionals to due process of law in relationship to Board actions in the State of Missouri past, present and future. This will make the disciplinary agreements legal; past, present and future.

House Bill 1208 was passed by the House the week of February 7th.

The BHA has found themselves in violation of Missouri law. They now try to make a law so that they are legal; past, present and future. Guilty or not guilty. Who do you trust?

**Gary Bodenhausen, MD, AAFP**
*Blue Springs, Missouri*



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# Write to Your Legislators

Melvin C. Kasten, MD, MSMA President

I've seen our profession change through the years. I remember the times before the endless forms and paperwork, the regulations and guidelines which often hinder our work as much as help it. I understand that many of these laws are necessary and beneficial in the long run, but being a doctor was a lot more fun before them. Back then it was clear that the purpose of a physician was to heal people. Since then, the government has created a number of regulations and laws concerning Americans' health care and the people who provide it. The increase in governmental regulation has also increased the doctor's responsibility to keep a steady and open working relationship with elected officials.

Because the legislators now spend a lot more of their time considering issues in health care, we must serve as representatives of both the administrators and receivers of that care. We are the best witnesses to the benefits and negative aspects of the current system, and to what changes need to be made to improve it.

Physicians need to inform those who make laws concerning health care about the position of those in our profession. This may be in terms of malpractice insurance or any other governmental regulation of our work, time or resources. Another very important responsibility of our profession is to inform lawmakers about the effects on and positions of our patients. We would all agree that our primary concern is for our patients and their well being when reforms are made in the health care system. We must contact our legislators and inform them about how these changes will effect our specific patients, how they feel about the current problems, and how they would like to see the system improve.

No other group of people is better qualified to assess this aspect of health care than the physician. There is a misconception that doctors do not want health care reforms, or that we practice for the money involved, and not for the love of the profession. We must work to shatter this myth by writing to legislators on behalf of our patients and their interests. If we write to legislators, stressing the need for change, others may realize that this is a problem worth examining. If others see that the doctors are working for change, perhaps they will feel the need to do so as well. Although individuals may write to their legislators and request action, they represent only one or two patients in their community. These messages are important, but they do not necessarily represent a large percentage of a legislator's constituency.

On the other hand, when a doctor expresses concern about a policy affecting patients, he or she speaks for many patients and their families. The physician's voice is more powerful than any of the other constituents now addressing health care reform issues.

Our credibility and expertise can influence a legislator's decision about how to vote on health care legislation. We have a responsibility to our current and future patients, as the most informed and educated group concerned with health care issues, to express our insight and views to our legislators and help them make the best informed decisions.

It is important that we express our concerns and our patients' concerns, since they are directly affected by legislation and regulation concerning health care. This issue has been brought to the front burner of public debate because of the presentation of the Clinton Health Care Plan and competing plans. It is clear that adequate primary and extended care must be available to all members of our community. This is a primary concern, and if we aren't familiar with how these services are being provided now, or are apathetic about reform, our creditability will suffer and our ability to provide care will be reduced in the long run.

In order to express to the politicians how the laws affect us and our patients, we must write to our legislators and let them know explicitly how we feel and what is happening in the real world.

**Continued on page 116**

Continued from page 115

There are several relatively quick, painless and easy ways to do this. You do not have to write a 10 page thesis detailing your specific problems with the current health care system or expressing your concern about specific policy implications. Such an unloading of information may be beneficial, but a short, one or two page letter would be enough to present your view to your representative. If you are unfamiliar with the specifics of the competing national health care plans or the AMA's position, you might want to consult the AMA's "Health Access America" brochure. Your letter can either congratulate a legislator for good decisions about a particular policy, or questioning their stand on a policy that you do not agree with. In either case, such feedback is beneficial to a legislator because it helps present constituency viewpoints on a topic the legislator may not have decided yet. Most legislators like to have clear signals from a large number of their constituents before casting their vote.

This happened at one time to my wife, Mary. When the question of a state lottery came before the legislature Mary felt that it was unnecessary, and would have probably voted against it. But, her constituents who supported the lottery wrote and expressed their views to her. Seventy five percent of the letters she received were in support of the lottery, and so Mary voted for it. Even though this may not have exactly represented her district's opinion on the issue, her mail is what she has to measure the ideas and feelings of her constituents, and she acts on that information.

When you write to your legislators, there are a few things to remember. First, this person is interested in your opinion, and thankful to receive it. I know that Mary appreciates the feedback she gets from constituents. It serves as a sort of road map for a legislator's actions and commitments, removing much of the guess work about constituents' feelings.

Don't be afraid to state exactly how you feel about an issue. Still, you must remember not to be militant or hateful in your wording of the letter if you disagree with your legislator's opinions. If you disagree with your legislator on this issue, be kind, because he or she may agree with you when the next major voting issue comes up.

You should be direct and to the point. Let them know how you feel and why. The staff of a legislator will appreciate brevity and directness in your opinions. Then, be sure to thank the legislator for his or her time or for the work he or she is doing. We must help them understand that we appreciate their work and we are simply trying to make their job easier by expressing our views and those of our patients. And, one more point to remember is to type your letter.

Our views are more likely responded to if a large number of letters are received that express a similar viewpoint. This is why we frequently ask all MSMA members to write to their legislators, with the strength of the numbers in the Missouri State Medical Association, we can certainly influence public policy decisions.

As I said earlier, legislators react when they receive a number of letters that express a common point of view. I hope that all of you will take the time to write your legislators and express to them the views of our state and national medical organizations and your personal feelings about the health care reform.

Your senator and congressperson work for *you*. Let them know how you feel about issues so that they can represent you fairly. If you remain silent, other people in the district or state will decide how your legislator acts on an issue. Remember the words of Thomas Jefferson, "When a man assumes a public trust, he should consider himself a public property." Take advantage of your legislator, because he or she is there to represent your interests and that of your patients.

Legislators rarely receive letters from the doctors in their districts. As I said, we are among the most qualified to assess the health care situation. So, it is our responsibility to inform our legislators about the situation as we see it. We should encourage our patients to write, too. Legislators appreciate hearing the opinions of their constituents, and work to accommodate the overall interests of their state or district. ■

# Ophthalmology Quiz #3

John C. Hagan, III, MD

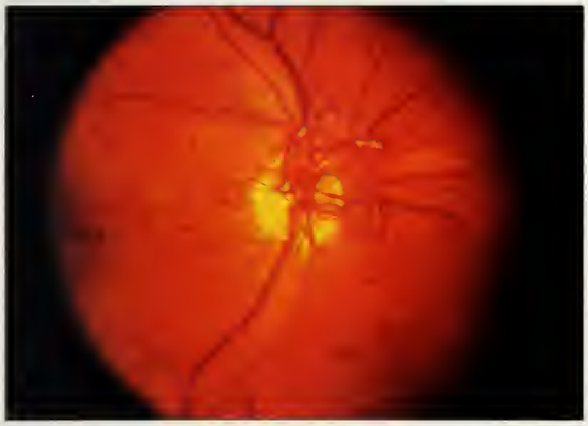

Figure 1

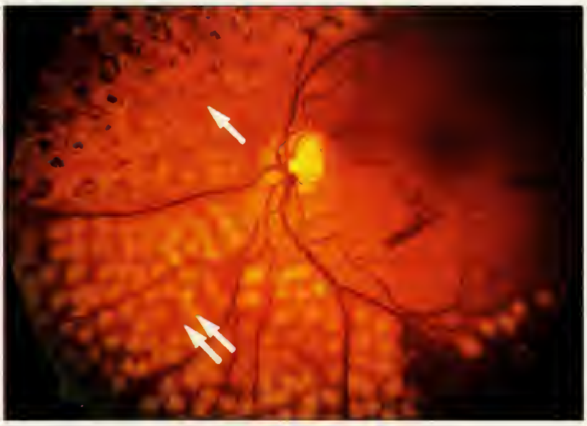

Figure 2

Both of the Ophthalmoscopic retina photographs shown in figure 1 and 2 are from Type 1 diabetics. Both patients smoke and have untreated hypertension. Choose the correct answer.

1. **The best diagnosis for the condition shown in figure 1 is:**
   a. **Hypertensive retinopathy**
   b. **Non-proliferative diabetic retinopathy**
   c. **Proliferative diabetic retinopathy**
   d. **Optic neuritis**

2. **The best diagnosis for the condition shown in figure 2 is:**
   a. **Cytomegalovirus retinitis due to AIDS**
   b. **Flecked retina syndrome**
   c. **Ocular histoplasmosis syndrome**
   d. **Recent and remote photocoagulation burns**

**(See answers on next page.)**

The Ophthalmology Quiz is produced and coordinated by John C. Hagan III, MD, Director, Midwest Eye Institute of Kansas City, Inc., North Kansas City, Missouri. Financial support for this feature is provided by ALCON SURGICAL, North Kansas City Hospital, Missouri Ophthalmological Society, Inc., CHIRON, Inc., MERCK & CO. INC., O. H. Gerry Optical Co. and IOPTEX , Inc.

# OPHTHALMOLOGY QUIZ ANSWER

(Ophthalmology Questions are on previous page.)

**ANSWERS:**
1. c. Proliferative diabetic retinopathy
2. d. Recent and remote photocoagulation burns

Diabetes is the leading cause of new blindness in American adults under age sixty-five. Although diabetics have a number of ocular problems (cataracts and changing refractive error) the main blinding complication is diabetic retinopathy. The incidence and severity of diabetic retinopathy is related to the length of time a person has diabetes, how well it is controlled and the presence of other risk factors such as untreated hypertension and smoking. A recent NEJM study showed that rigorous control of blood glucose reduced the risk of the development of diabetic retinopathy by 76%.

The initial stage of the ocular disease is nonproliferative diabetic retinopathy (NPDR). Capillaries develop leaks and later become occluded. The retinal findings include micro-aneurysms, dot and blot hemorrhages, hard exudates and macular edema. Vision may be quite good if macular edema is not present. As the disease progresses marked vascular tortuosity, venous beading, widespread microvascular abnormalities and retinal ischemia develop. Microinfarcts cause nerve fiber layer or cotton wool spots (Fig. 3).

As a response to continued retinal ischemia, new blood vessels (neovascularization) form in the area of the optic nerve (Fig. 1) or elsewhere on the retinal surface. This is called proliferative diabetic retinopathy (PDR). Neovascularization can also occur on the iris causing severe glaucoma. These fragile new vessels if left untreated by laser will bleed into the vitreous and/or cause traction detachment of the retina.

In treating PDR the Ophthalmologist scatters 1000 to 2000 laser burns over the entire surface of the retina except the central part of the retina. This treatment reduces the metabolic oxygen requirement of the retina and promotes regression of the neovascular tissue. Newly treated areas appear as round, whitish regularly spaced lesions (Fig. 2, double arrow). In time the laser burns cause an irregular hyper and hypopigmentation pattern (Fig. 2, single arrow).

When laser treatment is initiated early in the ocular disease process the risk of blindness can be reduced by 50-90%. A disturbingly large percentage of diabetics are not examined by Ophthalmologists on a regular or timely basis. Non-Ophthalmic physicians using non dilated pupils and direct Ophthalmoscopes have a risk of greater than 50% of failing to diagnose diabetic retinopathy. All physicians caring for diabetics should educate them on ocular complications and make sure that they see an Ophthalmologist annually. Diabetics need to know that good vision may be present even with severe PDR that urgently requires treatment (Fig. 1). Physicians can easily be mislead by asking diabetics if they have had their eyes checked recently. They will often answer affirmatively if they have had an employment visual screening, a driver's license vision test or a glasses check at the local mall. It is necessary to confirm that they have seen an Ophthalmologist. If they do not have a personal Ophthalmologist they should be referred to one.

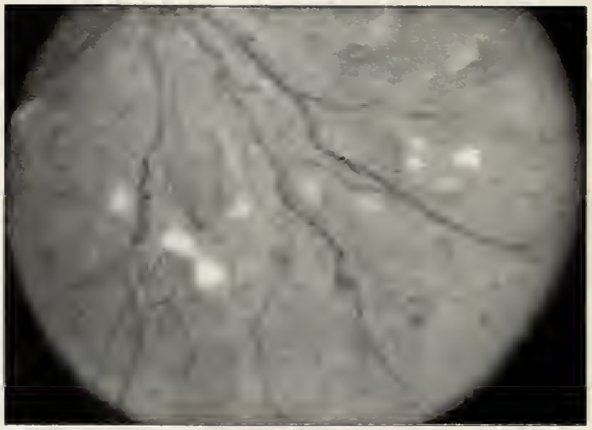

Figure 3. Severe non-proliferative diabetic retinopathy with cotton-wool spots, venous beading and telangiectasia of the retinal vessels are shown. Proliferative diabetic retinopathy will develop in 40-50% of these patients.

*References*

1. American Academy of Ophthalmology: *Basic Ophthalmology for medical students and primary care residents.* 6th Edition, Frank G. Berson, Editor. San Francisco
2. The Diabetes Control and Complications Trial Research Group: The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *N Engl J Med* 1993;329:977-986

# 1993 MSMA FINANCIAL STATEMENTS

## REPORT OF
## MISSOURI STATE MEDICAL ASSOCIATION

*Jefferson City, Missouri* *December 31, 1993*

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REPORT OF CERTIFIED PUBLIC ACCOUNTANT
FINANCIAL STATEMENTS
  Balance Sheets
  Statements of Revenues, Expenses and Changes in Members' Equity
  Statements of Cash Flows
NOTES TO FINANCIAL STATEMENTS
ACCOMPANYING INFORMATION
  Schedules of Selected Expenses

### Report of Certified Public Accountant To the Council of Missouri State Medical Association:

We have audited the accompanying Balance Sheets of Missouri State Medical Association as of December 31, 1993 and 1992, and the related Statements of Revenues, Expenses and Changes in Members' Equity and Cash Flows for the years then ended. These Financial Statements are the responsibility of the Association's management. Our responsibility is to express an opinion on these Financial Statements based on our audits.

We did not examine the Financial Statements of MOMED Holding Company at December 31, 1993 and 1992. These Financial Statements were audited by another firm.

These Financial Statements are not in accordance with Generally Accepted Accounting Principles which require investments in the subsidiary and the affiliate to be consolidated with the controlling entity.

We conducted our audits in accordance with Generally Accepted Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Financial Statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Financial Statements. An audit also includes assessing the accounting principles used, and significant estimates made by management, as well as evaluating the overall Financial Statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, except for the above comments, the Financial Statements referred to above present fairly, in all material respects, the financial position of Missouri State Medical Association as of December 31, 1993 and 1992, and the results of their operations and its cash flows for the years then ended in conformity with Generally Accepted Accounting Principles.

Our audits were made for the purpose of forming an opinion on the basic Financial Statements taken as a whole. The Schedules of Selected Expenses for the years ended December 31, 1993 and 1992 are presented for purposes of additional analysis and are not a required part of the basic Financial Statements. Such information has been subjected to the auditing procedures applied in the audit of the basic Financial Statements and, in our opinion, is fairly stated in all material respects in relation to the basic Financial Statements taken as a whole.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants
January 21, 1994

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## MISSOURI STATE MEDICAL ASSOCIATION

### BALANCE SHEETS
### December 31, 1993 and 1992

| ASSETS | 1993 | 1992 |
|---|---|---|
| CURRENT ASSETS | | |
| Cash and Cash Investments (Note 2) | $1,399,690 | $1,427,798 |
| Marketable Securities (Note 3) | 1,152,371 | 1,036,872 |
| Accounts Receivable | 8,567 | 22,322 |
| Other Current Assets | 9,672 | 3,681 |
| Total Current Assets | 2,570,300 | 2,490,673 |
| INVESTMENTS | | |
| Common Stock of MSMI, Inc. (Note 4) | 34,835 | 33,215 |
| Common Stock of MOMED Holding Company, a 10.8% owned Affiliate, lower of cost or market (Note 5) | 169,295 | 169,295 |
| Total Investments | 204,130 | 202,510 |
| LAND, BUILDING AND EQUIPMENT (Note 6) | 525,825 | 568,406 |
| OTHER ASSETS | | |
| Cash Surrender Value - Insurance | 82,788 | 68,578 |
| TOTAL ASSETS | $3,383,043 | $3,330,167 |
| LIABILITIES AND MEMBERS' EQUITY | | |
| CURRENT LIABILITIES | | |
| Accounts Payable and Accrued Expenses | $ 11,574 | $ 3,958 |
| Due to the American Medical Association | 187,740 | 179,882 |
| Deferred Revenue | 217,872 | 218,045 |
| Total Current Liabilities | 417,186 | 401,885 |
| SUBORDINATED NOTES PAYABLE (Note 7) | 590,781 | 590,781 |
| DEFERRED COMPENSATION (Note 8) | 66,747 | 60,195 |
| Total Liabilities | 1,074,714 | 1,052,861 |
| MEMBERS' EQUITY | 2,308,329 | 2,277,306 |
| TOTAL LIABILITIES AND MEMBERS' EQUITY | $3,383,043 | $3,330,167 |

## MISSOURI STATE MEDICAL ASSOCIATION

### STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN MEMBERS' EQUITY
For the Years Ended December 31, 1993 and 1992

| | 1993 | 1992 |
|---|---|---|
| REVENUES | | |
| Dues | $1,243,731 | $1,258,429 |
| Subscriptions | 17,148 | 17,534 |
| Exhibit Rentals | 25,000 | 40,931 |
| Advertising | 55,733 | 66,431 |
| Commissions on Collections | 13,668 | 10,937 |
| Investment Income (Note 9) | 231,189 | 229,415 |
| Administrative Fees and Office Rent (Note 10) | 44,506 | 43,263 |
| Seminars and Workshops | 51,164 | 47,036 |
| Physicians Health Foundation (Note 11) | 71,900 | 103,567 |
| Other Revenue | 24,008 | 34,360 |
| Total Revenues | 1,778,047 | 1,851,903 |
| EXPENSES | | |
| Salaries and Fringe Benefits | $ 776,781 | $ 764,010 |
| Office Expense | 100,746 | 105,323 |
| Travel Expense | 11,331 | 9,981 |
| Commissions and Committee Expense | 17,833 | 7,892 |
| Depreciation | 47,876 | 49,091 |
| MSMA Auxiliary | 9,435 | 7,815 |
| Journal Expense | 129,719 | 136,720 |
| Meeting Expense | 209,753 | 215,167 |
| Public Affairs | 25,845 | 31,501 |
| Consultant and Professional Fees | 78,742 | 74,489 |
| Public Relations Program | 38,330 | 29,914 |
| Student Awards | 1,200 | 1,200 |
| Tort Reform | 5,441 | 30,678 |
| Miscellaneous | 22,531 | 5,108 |
| Seminars and Workshops | 45,780 | 60,742 |
| Physicians Health Foundation (Note 11) | 150,542 | 143,853 |
| Insurance Survey | 0 | 36,815 |
| Medicaid Project | 330 | 21,703 |
| Medical Research Center | 31,218 | 10,429 |
| Physicians Guides to Law and Medicine | 45,000 | 0 |
| Missouri State Medical Foundation | 211 | 0 |
| Contributions to Physicians Health Foundation | 0 | 2,125 |
| Total Expenses | 1,748,644 | 1,744,556 |
| Excess (Deficiency) of Revenues Over Expenses Before Equity in Net Income of Investments | $ 29,403 | $ 107,347 |
| Equity in Subsidiary of MSMI, Inc. (Note 4) | 1,620 | ( 2,188) |
| Excess (Deficiency) of Revenues Over Expenses | 31,023 | 105,159 |
| MEMBERS' EQUITY, BEGINNING | 2,277,306 | 2,172,147 |
| MEMBERS' EQUITY, ENDING | $2,308,329 | $2,277,306 |

## MISSOURI STATE MEDICAL ASSOCIATION

### STATEMENTS OF CASH FLOWS
For the Years Ended December 31, 1993 and 1992

| | 1993 | 1992 |
|---|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES | $ 31,023 | $ 105,159 |
| ADJUSTMENTS TO RECONCILE EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES TO NET CASH PROVIDED BY OPERATING ACTIVITIES | | |
| Depreciation | $ 47,876 | $ 49,091 |
| (Increase) or Decrease to Accounts Receivables | 13,755 | ( 10,993) |
| (Increase) or Decrease in Other Current Assets | ( 5,991) | ( 3,450) |
| (Increase) or Decrease in Cash Surrender Value | ( 14,210) | ( 7,507) |
| Increase or (Decrease) in Accounts Payable | 7,616 | ( 19,668) |
| Increase or (Decrease) in Due to the AMA | 7,858 | 10,037 |
| Increase or (Decrease) in Deferred Revenue | ( 173) | 18,356 |
| Increase or (Decrease) in Deferred Compensation | 6,552 | 6,354 |
| Total Adjustments | 63,283 | 42,220 |
| Net Cash Provided by Operations | 94,306 | 147,379 |
| CASH FLOW FROM INVESTING ACTIVITIES | | |
| (Increase) or Decrease in Marketable Securities | ( 115,499) | ( 39,706) |
| (Increase) or Decrease in MSMI, Inc. Investment | ( 1,620) | 2,188 |
| Purchase of Equipment | ( 5,295) | ( 11,942) |
| Net Cash Used Investing | ( 122,414) | ( 49,460) |
| NET INCREASE OR (DECREASE) IN CASH | ( 28,108) | ( 97,919) |
| CASH AT BEGINNING OF YEAR | 1,427,798 | 1,329,879 |
| CASH AT END OF YEAR | $1,399,690 | $1,427,798 |

**The Notes to Financial Statements are an integral part of these Statements.**

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## MISSOURI STATE MEDICAL ASSOCIATION

### NOTES TO FINANCIAL STATEMENTS
December 31, 1993 and 1992

Note 1. Summary of Significant Accounting Policies

Organization:

The Missouri State Medical Association was incorporated as a not-for-profit corporation under the laws of the State of Missouri. The Internal Revenue Service has granted exemption under Code Section 501 (c)(6).

Basis of Accounting:

The Financial Statements of the Missouri State Medical Association are prepared on the accrual basis of accounting.

Dues:

Dues are assessed to members on a calendar-year basis. On December 31st of each year, members delinquent in payment of dues forfeit their memberships. The Association may also collect from members dues and assessments of the American Medical Association and County Medical Societies which are then forwarded to the respective organizations. The Association receives a fee for providing this service. Amounts received from members prior to January 1st of each year, which represents the subsequent year's dues, are recorded as Deferred Revenue.

Valuation of Accounts Receivable:

Accounts receivable are stated at face amount with no allowance for doubtful accounts. An allowance for doubtful accounts is not considered necessary because probable uncollectible accounts are immaterial.

Marketable Securities:

Investments in marketable equity securities are carried the lower of aggregate cost or market at the Balance Sheet date.

Property and Equipment:

Property and equipment are carried at cost. Depreciation is computed by the straight-line method based on estimated useful lives of the related assets.

Income Taxes:

The Association is exempt from Federal Income Taxes under the Internal Revenue Code Section 501 (c)(6). Any unrelated business income is subject to income tax.

Note 2. Cash and Cash Investments

The balance of cash and cash investments consisted of the following at December 31st:

| | 1993 | 1992 |
|---|---|---|
| Petty Cash | $ 50 | $ 50 |
| Cash in Bank, Executive Vice President Account | 9,664 | 5,819 |
| Cash in Bank, Treasury Account | 1,029 | 12,740 |
| Money Market Fund | 306,022 | 102,960 |
| Certificates of Deposit | 747,000 | 985,000 |
| Mutual Funds | 335,925 | 321,229 |
| TOTAL CASH | $1,399,690 | $1,427,798 |

Note 3. Marketable Securities

Investments in marketable equity securities are carried at the lower of aggregate cost or market at the Balance Sheet date.

The following is a summary of marketable equity securities at December 31st:

| | 1993 | 1992 |
|---|---|---|
| Aggregate Cost | $1,152,371 | $1,036,872 |
| Aggregate Market | 1,301,524 | 1,166,038 |
| UNREALIZED GAIN | $ 149,153 | $ 129,166 |

Net realized gain of $137,711 and $126,661 on the sale of marketable equity securities were included in revenue for the years ended December 31, 1993 and 1992, respectively.

Note 4. Investments in Unconsolidated Subsidiary

The Association's investments in MSMI, Inc., a 100% owned unconsolidated subsidiary, is carried at cost ($2,000) plus equity in the undistributed net earnings since the date of acquisition. At December 31, 1993 and 1992, the investment in the subsidiary is carried at $34,835 and $33,215, respectively.

Condensed financial data relating to the subsidiary follows:

BALANCE SHEETS

| | ---December 31--- | |
|---|---|---|
| ASSETS | 1993 | 1992 |
| CURRENT ASSETS | | |
| Cash, including Savings Account | $22,835 | $22,315 |
| Total Current Assets | $22,835 | 22,315 |
| INVESTMENTS - COMMON STOCK | 15,000 | 15,000 |
| TOTAL ASSETS | $37,835 | $37,315 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| CURRENT LIABILITIES | | |
| Accounts Payable | $ 3,000 | $ 4,100 |
| STOCKHOLDERS' EQUITY | | |
| Common Stock, $10 per value: 3000 shares authorized; 200 shares issued and outstanding | 2,000 | 2,000 |
| Retained Earnings | 32,835 | 31,215 |
| Total Stockholders' Equity | 34,835 | 33,215 |
| TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY | $37,835 | $37,315 |

STATEMENTS OF INCOME AND EXPENSES

| | 1993 | 1992 |
|---|---|---|
| Income | $ 5,937 | $ 4,093 |
| Expenses | 4,317 | 6,281 |
| NET INCOME | $ 1,620 | $( 2,188) |

Note 5. Investment of Affiliate

The Association exercises significant management control over its affiliate, MOMED Holding Company, owner of Missouri Medical Insurance Company (MOMEDICO), a mono-line Medical Professional Liability Insurance Company founded and sponsored by the Association.

At December 31, 1993 and 1992, ownership was:

| Total Ownership | Shares Outstanding | | Votes per Share | Votes |
|---|---|---|---|---|
| Class A C/S - $1 PAR | 222,343 | x | 1 | 222,343 |
| Class B C/S - $25 PAR | 24,185 | x | 15 | 362,775 |
| TOTAL VOTES | | | | 585,118 |

MSMI, Inc. (wholly owned subsidiary of Missouri State Medical Association) ownership:

| | | | | |
|---|---|---|---|---|
| Class A C/S - $ PAR | 4,000 | x | 1 | 4,000 |

Combined Ownership = 11.43%
Combined Voting Rights = 62.68%

This investment is carried at the lower of cost or market. Original cost is $322,775 with market value at both December 31, 1993 and 1992 of $169,295.

Most recently available condensed financial data relating to the subsidiary follows:

| | ------December 31------ 1992 | 1991 |
|---|---|---|
| CONSOLIDATED BALANCE SHEETS | | |
| Investments | $56,543,814 | $54,568,267 |
| Other Assets | 4,509,766 | 3,353,563 |
| TOTAL ASSETS | $61,053,580 | $57,921,830 |
| Reserve for Losses and Loss Adjustment Expense | $36,509,588 | $35,515,048 |
| Other Liabilities | 13,970,878 | 13,236,782 |
| Total Liabilities | 50,480,466 | 48,751,830 |
| STOCKHOLDERS' EQUITY | 10,573,114 | 9,170,000 |
| TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY | $61,053,580 | $57,921,830 |

| | ------December 31------ 1993 | 1992 |
|---|---|---|
| CONSOLIDATED STATEMENTS OF OPERATIONS | | |
| Revenues | $15,009,191 | $17,173,171 |
| Expenses | 13,688,258 | 12,757,926 |
| TOTAL | 1,320,933 | 4,415,245 |
| PROVISION FOR FEDERAL INCOME TAX | 1,970 | 1,121,283 |
| NET EARNINGS | $1,318,963 | $ 3,293,962 |

Note 6. Land, Building and Equipment

Consists of the following at December 31st (at Cost):

| | 1993 | 1992 |
|---|---|---|
| Land | $ 83,000 | $ 83,000 |
| Building | 581,704 | 581,704 |
| Furniture and Equipment | 309,869 | 305,374 |
| Total | 974,573 | 970,078 |
| LESS: Accumulated Depreciation | 448,748 | 401,672 |
| TOTAL LAND, BUILDING AND EQUIPMENT | $ 525,825 | $ 568,406 |

Note 7. Subordinated Notes Payable

In 1978, the Association formed a wholly-owned subsidiary, MOMEDICO, to provide professional liability and premises liability insurance for physicians and support technicians practicing in the State of Missouri. Before obtaining professional liability insurance through MOMEDICO, physicians residing in the State of Missouri were required to subscribe to non-interest bearing subordinated notes based upon the physician's underwriting classification. These notes were issued by the Association and the subscriptions were payable over a three-year period.

The Association was the sole stockholder of MOMEDICO prior to public stock offering of MOMEDICO in 1980. At that time, the requirement to purchase subordinated notes was eliminated with new policies effective January 31, 1980.

In connection with the public stock offering in 1980, MOMEDICO assumed, in exchange for 100,815 of the 125,000 shares of the Class B common stock the Association held in MOMEDICO, the face value of the subordinated notes issued and outstanding. MOMEDICO also assumed the balance of the installments receivable on the subordinated notes and a bank note payable from the Association. Under an exchange offer made by MOMEDICO, holders of the Association's subordinated note could exchange fully paid notes for Class A common stock at the rate of $20 face value per share.

On October 15, 1980, the Association reassumed all notes not exchanged and also the installments receivable on the unexchanged notes as well as an amount equal to the installments receivable of the bank note payable.

The notes requiring repayment only upon the Association's accumulation of in excess of $3,000,000 of Members' Equity at the end of any calendar year, that the Association has sufficient funds and assets, exclusive of the amount subject to repayment, be approved by the Council of the Association. Interest may be paid on the notes, but it is at the discretion of the Council of the Association.

Redemption of the notes are provided for in the event of death, disability, retirement of the holder, or if the holder has moved both his person and his practice out of the State of Missouri. However, redemption for such causes may be delayed or refused if the Council determines the Association is not on a financially reasonable basis to make such redemptions.

At both December 31, 1993 and 1992, the balance for the subordinated notes payable were $590,781. This amount reflects the face value of the notes reassumed by the Association on October 15, 1980, less the installments receivable on the outstanding notes, and less all redemptions made from 1981 through 1985. In 1985, the Council of the Association placed a moratorium on the redemption of the subordinated notes.

Note 8. Deferred Compensation Plan

The Association entered into a deferred compensation agreement with its Executive Vice-President on December 31, 1980 which provides for payments upon retirement, death or disability. The agreement also stipulates that a pro-rata settlement of benefits will be made in the event of voluntary termination of employment with the Association once five years of service is completed after the agreement becomes effective. A similar agreement was enacted May 1, 1990 between the Executive Director and the Association. Both agreements are funded through insurance policies.

At December 31, 1993 and 1992, the Association's liability under the terms of these agreements were $66,747 and $60,195, respectively with the underlying cash surrender value of life insurance being $82,788 and $68,578, respectively.

On December 17, 1989, the Association adopted a Deferred Compensation Plan for employees pursuant to Internal Revenue Service Code Section 457. Virtually all employees are covered by the Plan. Within Internal Revenue Service guidelines, participants may elect to defer a portion of their income until retirement. Funds invested for these purposes amounted to $83,871 and $55,821 as of December 31, 1993 and 1992, respectively.

Note 9. Investment Income

The following is a summary of investment income for the years ended December 31st:

| | 1993 | 1992 |
|---|---|---|
| Interest on Cash Investments | $ 30,871 | $ 47,907 |
| Dividends | 62,607 | 54,846 |
| Realized Gain (Loss) on Sale of Marketable Equity Securities | 137,711 | 126,662 |
| TOTAL INVESTMENT INCOME | $231,189 | $229,415 |

Note 10. Related Party Transactions

The Association provides administrative services to MSMI, Inc., (a wholly-owned subsidiary) and Missouri State Medical Foundation (an affiliate). For providing these services, the Association receives an annual fee from each of these two organizations. For the years ended December 31, 1993 and 1992, the administrative fee assessed Missouri State Medical Foundation was $15,000 annually, and the administrative fee assessed MSMI, Inc., was $3,000 and $4,100, respectively.

Note 11. Physicians Rehabilitation Program

In 1986, the Association established a Physicians Rehabilitation Program, the purpose of which is to motivate impaired physicians to voluntarily enter into treatment and to provide such a treatment program.

Funding for the program is provided by fees assessed to participants as well as from donations received from supportive individuals and organizations.

During 1992, the Missouri State Medical Association Physicians Health Foundation was separately incorporated. For the years ended December 31, 1993 and 1992, the Association received as income $71,900 and $103,567 from the Physicians Health Foundation and in turn paid expenses of $150,542 and $143,853, respectively. The resulting differences of $78,642 and $40,286 are considered in-kind contributions to the Physicians Health Foundation for the years ended December 31, 1993 and 1992.

Note 12. Pension Plan

The Association maintains a non-contributory defined benefit pension plan covering substantially all of its employees. Established April 1, 1959, the Plan has a March 31st year end. Eligibility requirements include a minimum of 12 service months and a minimum age of 21. Normal retirement age is 65 with provision for pro-rata benefits prior to 65. Vesting is scheduled over six years of covered service. The Individual Aggregate Actuarial Cost Method is used as the basis for the funding standard account computation. At March 31, 1993, the most recently available actuarial information, fair value of plan assets was $948,657, $795,930 in 1992. Total benefit obligation was $726,702, $518,971 in 1992, with a vested benefit obligation of $725,811, $518,279 in 1992.

Employer contributions for FYE March 31, 1993 was $68,594, $48,896 in 1992. Additional Plan income was $84,521, $97,062 in 1992, with expenses of $387, $2,561 in 1992, and benefits paid in the amount of $0, 2,400 in 1992, and net income for the Plan year was $152,728, $94,501 in 1992. There was no unconditional liability for any unfunded accumulated benefit obligation plus any prepaid pension cost, nor unfunded accumulated benefit obligation reduced by any unfunded accrued pension cost. Assets are invested primarily in government securities and corporate stocks and bonds.

Net periodic pension costs for 1993 of $69,944, $49,330 in 1992, was composed of employer's normal cost of $64,530, $45,137 in 1992, Amortization charge of $233, $233 in 1992, and interest of $5,181, $3,960 in 1992.

## ACCOMPANYING INFORMATION

### MISSOURI STATE MEDICAL ASSOCIATION

### SCHEDULES OF SELECTED EXPENSES

**For the Years Ended December 31, 1993 and 1992**

| | 1993 | 1992 |
|---|---|---|
| SALARIES AND FRINGE BENEFITS | | |
| Salaries | $537,454 | $541,884 |
| Payroll Taxes | 42,096 | 42,941 |
| Employees Life and Disability Insurance | 22,419 | 10,557 |
| Employees Hospitalization Insurance | 58,318 | 70,030 |
| Employees Pension Plan Contribution | 78,444 | 67,298 |
| Deferred Compensation Plan Expense | 38,050 | 31,300 |
| TOTAL SALARIES AND FRINGE BENEFITS | $776,781 | $764,010 |
| OFFICE EXPENSES | | |
| Occupancy Expense | $ 16,855 | $ 17,083 |
| Office Supplies | 21,937 | 28,134 |
| Computer Expense | ( 3,357) | 1,003 |
| Postage | 14,010 | 11,835 |
| Telephone | 13,192 | 12,585 |
| Insurance | ( 4,794) | 1,507 |
| General Expense | 0 | ( 316) |
| Taxes, Real Estate | 4,963 | 5,070 |
| Taxes, Other | 4,109 | 0 |
| Custodian Fee | 14,124 | 12,336 |
| Equipment Rental and Repair | 9,376 | 6,739 |
| Dues and Directories | 10,331 | 9,347 |
| TOTAL OFFICE EXPENSES | $100,746 | $105,323 |
| COMISSIONS AND COMMITTEES EXPENSES | | |
| Commissions: | | |
| Commission on Medical Economics, Third Party Medicine and Governmental Relations | $ 302 | $ 544 |
| Commission on Continuing Medical Education | 12,674 | 7,850 |
| Commission on Interspeciality Medicine | 393 | ( 502) |
| Total Commission Expenses | 13,369 | 7,892 |
| Committees: | | |
| Committee on Legislative Affairs | $ 350 | $ 0 |
| Committee on Public Affairs | 268 | 0 |
| Committee to Develop Physician Direction Organization | 3,846 | 0 |
| Total Committee Expenses | 4,464 | 0 |
| TOTAL COMMISSION AND COMMITTEE EXPENSES | $17,833 | $ 7,892 |
| MEETING EXPENSES | | |
| Meetings: | | |
| Annual Session | $ 68,129 | $ 87,965 |
| Council | 53,862 | 51,851 |
| AMA Delegates' Expenses | 80,624 | 70,218 |
| Student Section | 1,324 | 1,378 |
| Discretionary Council Fund | 1,896 | 2,053 |
| Hospital Medical Staff | 3,918 | 1,702 |
| TOTAL MEETING EXPENSES | $209,753 | $215,167 |

## Management Letter

**To the Council of**
**Missouri State Medical Association:**

In planning and performing our audits of the Financial Statements of Missouri State Medical Association for the years ended December 31, 1993 and 1992, we considered its internal control structure in order to determine our auditing procedures for the purpose of expressing our opinion on the Financial Statements and not to provide assurance on the internal control structure. We noted no matters involving the internal control structure and operations that we consider to be reportable conditions under standards established by the American Institute of Certified Public Accountants. Reportable conditions involve matters coming to our attention relating to significant deficiencies in the design or operations of the internal control structure that, in our judgement, could adversely affect Missouri State Medical Association's ability to record, process, summarize, and report financial data consistent with the assertions of management in the Financial Statements.

A material weakness is a reportable condition in which the design or operation of one or more of the internal control structure elements does not reduce, to a relatively low level, the risk of errors or irregularities in amounts that would be material in relation to the Financial Statements being audited may occur and not be detected within a timely period by employees in the normal course of work performing their assigned functions.

Our consideration of the internal control structure would not necessarily disclose all matters in the internal control structure that might be reportable conditions and, accordingly, would not necessarily disclose all reportable conditions that are also considered to be material weaknesses as defined above. No reportable conditions as described above were found.

This report is intended solely for the information and use of Missouri State Medical Association, management, and others within the Organization.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants

January 21, 1994

# 1993 MSMF FINANCIAL STATEMENTS

## REPORT OF
## MISSOURI STATE MEDICAL FOUNDATION

*Jefferson City, Missouri* *December 31, 1993*

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REPORT OF CERTIFIED PUBLIC ACCOUNTANT
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 Statements of Revenues, Expenses and Changes in Fund Balance - Modified Cash Basis
NOTES TO FINANCIAL STATEMENTS

### Report of the Certified Public Accountant

**To the Board of Directors of**
**Missouri State Medical Foundation:**

We have audited the accompanying Statements of Assets and Fund Balance-Modified Cash Basis of Missouri State Medical Foundation as of December 31, 1993 and 1992, and the related Statements of Revenues, Expenses and Changes in Fund Balance-Modified Cash Basis for the years then ended. These Financial Statements are the responsibility of the Foundation's management. Our responsibility is to express an opinion on these Financial Statements based on our audits.

We conducted our audits in accordance with Generally Accepted Auditing Standards. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the Financial Statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Financial Statements. An audit also includes assessing the accounting principles used, and significant estimates made by management, as well as evaluating the overall Financial Statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As described in Note 1, these Financial Statements were prepared on the Modified Cash Basis of Accounting, which is a comprehensive basis of accounting other than Generally Accepted Accounting Principles.

In our opinion, except for the above comments, the Financial Statements referred to above present fairly, in all material respects, the financial position of Missouri State Medical Foundation as of December 31, 1993 and 1992, and the results of their operations and its cash flows for the years then ended on the basis of accounting described in Note 1.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants

January 24, 1994

**The Notes to Financial Statements are an integral part of these Statements.**

## MISSOURI STATE MEDICAL FOUNDATION

### STATEMENTS OF ASSETS AND FUND BALANCE - MODIFIED CASH BASIS
December 31, 1993 and 1992

| ASSETS | 1993 | 1992 |
|---|---|---|
| CURRENT ASSETS | | |
| Cash (Note 2) | $ 351,913 | $ 147,639 |
| Investments (Note 3) | 525,313 | 691,278 |
| Loans Receivable, Current (Note 4) | 208,188 | 175,000 |
| Total Current Assets | 1,085,414 | 1,013,917 |
| LONG-TERM ASSETS | | |
| Loans Receivable, Long-term (Note 4) | 1,522,255 | 1,427,644 |
| TOTAL ASSETS | $2,607,669 | $2,441,561 |
| FUND BALANCE | $2,607,669 | $2,441,561 |

## MISSOURI STATE MEDICAL FOUNDATION

### STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN FUND BALANCE - MODIFIED CASH BASIS
For the Years Ended December 31, 1993 and 1992

| | 1993 | 1992 |
|---|---|---|
| REVENUES | | |
| Interest on Student Loans | $ 109,626 | $ 73,397 |
| Investment Income | 39,001 | 42,521 |
| Contributions | 4,568 | 4,369 |
| Gain on Sales of Securities | 53,520 | 29,579 |
| Recovery of Loans Written Off | 0 | 3,211 |
| Total Revenues | 206,715 | 153,077 |
| EXPENSES | | |
| Administrative | $ 15,216 | $ 15,000 |
| Professional Fees | 18,093 | 21,230 |
| Printing and Meeting | 403 | 725 |
| Provision for Loan Losses | 3,953 | 11,867 |
| Miscellaneous | 2,942 | 1,454 |
| Total Expenses | 40,607 | 50,276 |
| EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES | 166,108 | 102,801 |
| FUND BALANCE, BEGINNING | 2,441,561 | 2,338,760 |
| FUND BALANCE, ENDING | $2,607,669 | $2,441,561 |

## MISSOURI STATE MEDICAL FOUNDATION

### NOTES TO FINANCIAL STATEMENTS
December 31, 1993 and 1992

Note 1. Summary of Significant Accounting Policies

Organization:

Missouri State Medical Foundation was organized in 1961 for the purpose of making low-interest loans to medical students.

Basis of Accounting:

The accounts are maintained, and these Financial Statements are presented on, a Modified Cash Basis of Accounting. Under that basis, revenues are recognized when received rather than when earned, and expenses are recognized when paid rather than when incurred.

Investments:

Investments are stated at the lower of aggregate cost or market at the Balance Sheet date.

Loans Receivable:

Loans receivable are stated at face amount less an allowance for doubtful accounts of three percent of the loan balances at year end.

Income Taxes:

The Foundation is qualified as an exempt organization under Section 501 (c)(3) of the Internal Revenue Code and is not subject to Federal or State Income Tax.

Note 2. Cash

Cash includes the following accounts:

| | 1993 | 1992 |
|---|---|---|
| Cash in Bank | $ 4,554 | $(13,290) |
| Money Market & CD, Bank | 272,085 | 73,684 |
| Money Market, Prudential | 75,274 | 87,245 |
| TOTAL CASH | $351,913 | $147,639 |

Note 3. Investments

At December 31, 1993 and 1992, the Foundation's portfolio of marketable securities consisted of securities with a cost of $525,313 and $691,278, respectively, and market value of $540,467 and $738,849, respectively. Gross unrealized gains on all marketable securities were $86,960 and $74,642, respectively, and gross unrealized losses were $71,806 and $74,642, respectively for the years then ended. Net realized gains included in revenues were $53,520 and $29,579, respectively. The costs of securities sold were determined on a specific share basis. Net realized gains for 1992 have been restated from an originally reported $9,468.

Note 4. Loans Receivable

The following is a summary of the transactions affecting the loans receivable account for the year:

| | 1993 | 1992 |
|---|---|---|
| Loans Receivable, | | |
| Beginning of Year | $1,652,210 | $1,361,259 |
| New Loans | 377,455 | 466,730 |
| Principal Payments | ( 245,703) | ( 172,640) |
| Loans Written Off | 0 | ( 3,139) |
| LOAN RECEIVABLE, | | |
| Ending of Year | $1,783,962 | $1,652,210 |
| Allowance for Doubtful Accounts, | | |
| Beginning of Year | $ 49,566 | $ 40,838 |
| Current Year Provision | 3,953 | 11,867 |
| Loans Written Off | 0 | ( 3,139) |
| ALLOWANCE FOR DOUBTFUL ACCOUNTS, | | |
| Ending of Year | $ 53,519 | $ 49,566 |

Note 5. Equipment

Equipment is fully depreciated at December 31, 1992. In past years, depreciation was determined on a straight-line basis.

Note 6. Related Party Transactions

The Foundation is assessed by the Missouri State Medical Association, an annual fee for administrative cost. For the years ended December 31, 1993 and 1992, the Foundation paid the Association $15,000 for administrative costs. The Foundation also reimburses the Missouri State Medical Association for expenses paid by the Association on behalf of the Foundation. This reimbursement for the years ended December 31, 1993 and 1992 was $403 and $725 for printing and meeting expenses.

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## Management Letter

**To the Board of Directors of**
**Missouri State Medical Foundation:**

In planning and performing our audits of the Financial Statements of Missouri State Medical Foundation for the year ended December 31, 1993 and 1992, we considered its internal control structure in order to determine our auditing procedures for the purpose of expressing our opinion on the Financial Statements and not to provide assurance on the internal control structure. We noted no matters involving the internal control structure and operations that we consider to be reportable conditions under standards established by the American Institute of Certified Public Accountants. Reportable conditions involve matters coming to our attention relating to significant deficiencies in the design or operations of the internal control structure that, in our judgement, could adversely affect Missouri State Medical Foundation's ability to record, process, summarize, and report financial data consistent with the assertions of management in the Financial Statements.

A material weakness is a reportable condition in which the design or operation of one or more of the internal control structure elements does not reduce, to a relatively low level, the risk of errors or irregularities in amounts that would be material in relation to the Financial Statements being audited may occur and not be detected within a timely period by employees in the normal course of work performing their assigned functions.

Our consideration of the internal control structure would not necessarily disclose all matters in the internal control structure that might be reportable conditions and, accordingly, would not necessarily disclose all reportable conditions that are also considered to be material weaknesses as defined above. No reportable conditions as described above were found.

This report is intended solely for the information and use of Missouri State Medical Foundation, management, and others within the Foundation.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants

January 24, 1994

# 1993 MSMA-PHF FINANCIAL STATEMENTS

## REPORT OF
## MSMA - PHYSICIANS HEALTH FOUNDATION

*Jefferson City, Missouri* — *December 31, 1993*

**To the Board of Directors of
MSMA Physicians Health Foundation:**

We have reviewed the accompanying Balance Sheets of Missouri State Medical Association Physicians Health Foundation as of December 31, 1993 and 1992, and the related Statements of Revenues, Expenses and Changes in Fund Balance for the years then ended, in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. All information included in these Financial Statements is the representation of the management of the Foundation.

A review consists principally of inquiries of Foundation personnel and analytical procedures applied to financial data. It is substantially less in scope than an audit in accordance with Generally Accepted Auditing Standards, the objective of which is the expression of an opinion regarding the Financial Statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our reviews, we are not aware of any material modifications that should be made to the accompanying Financial Statements in order for them to be in conformity with Generally Accepted Accounting Principles.

DULLE & ASSOCIATES, P.C.
Certified Public Accountants
January 21, 1994

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### BALANCE SHEETS
### December 31, 1993 and 1992

| ASSETS | 1993 | 1992 |
|---|---|---|
| CURRENT ASSETS | | |
| Cash | $ 4,757 | $ 800 |
| TOTAL ASSETS | $ 4,757 | $ 800 |
| LIABILITIES AND FUND BALANCE | | |
| CURRENT LIABILITIES | | |
| Deferred Income, Contributions (Note 2) | $ 6,000 | $ 0 |
| Total Current Liabilities | 6,000 | 0 |
| FUND BALANCE | ( 1,243) | 800 |
| TOTAL LIABILITIES AND FUND BALANCE | $ 4,757 | $ 800 |

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### STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN FUND BALANCE
### For the Years Ended December 31, 1993 and 1992

| | 1993 | 1992 |
|---|---|---|
| REVENUES | | |
| Contributions, Cash | $ 47,361 | $ 78,023 |
| Contributions, In-kind (MSMA) | 78,642 | 40,286 |
| Service Fees | 22,920 | 23,655 |
| Total Revenues | 148,923 | 141,964 |
| EXPENSES | | |
| Professional Services | $112,109 | $119,434 |
| Voice-mail/Pager | 945 | 736 |
| Office Supplies | 4,375 | 5,476 |
| Travel Expense | 6,635 | 7,450 |
| Telephone | 4,034 | 5,195 |
| Office Rent | 3,766 | 4,603 |
| Contracts Expense | 17,733 | 0 |
| Miscellaneous | 945 | 959 |
| Bank Service Charge | 424 | 408 |
| Total Expenses | 150,966 | 144,261 |
| EXCESS (DEFICIENCY) REVENUES OVER EXPENSES | (2,043) | (2,297) |
| FUND BALANCE, BEGINNING | 800 | 3,097 |
| FUND BALANCE, ENDING | $( 1,243) | $ 800 |

**The Notes to Financial Statements are an integral part of these Statements.**

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### NOTES TO FINANCIAL STATEMENTS
### December 31, 1993 and 1992

Note 1. Summary of Significant Accounting Policies

Organization:
Missouri State Medical Association Physicians Health Foundation was incorporated as a not-for-profit corporation under the laws of the State of Missouri on March 26, 1990.

The purpose of the Foundation is to support and promote quality professional healthcare through the sponsoring, supporting, initiating, funding and establishing of the rehabilitation of chemically-dependent or mentally-impaired physicians.

The Foundation is a supporting organization under Internal Revenue Code Section 509 (a)(3). As such, the Foundation has common officers with the Missouri State Medical Association, a Section 501 (c)(6) organization. In addition, the six officers and directors of the Foundation are also directors and members of the Executive Committee of Missouri State Medical Association.

Basis of Accounting:
The Financial Statements of Missouri State Medical Association Physicians Health Foundation are prepared on the accrual basis of accounting.

Income Taxes:
The Foundation is qualified as a exempt organization under Internal Revenue Code Section 501 (c)(3) and is not generally subject to Federal or State Income Tax.

Note 2. Deferred Income

Deferred income is comprised of contributions received from two donors prior to January 1, 1994, in fulfillment of pledges for the year ending December 31, 1994. These funds will be recorded as contribution income for 1994.

Note 3. Revenues

The Foundation receives contributions from hospitals, physician groups, insurance companies and interested individuals. Additionally, the Missouri State Medical Association underwrites a significant portion of operating expenses. Fees are also charged, in a nominal amount, to service recipients.

# Going to Kansas City - Kansas City Here I Come

To: All Physicians and Your Spouses
From: MSMAA Convention Co-Chairs,
Loretta Allebach (Mrs. Hobart)
Connie Ashcraft (Mrs. Keith)
Millie Bever (Mrs. Grant)

You are cordially invited to the "fun" events of the MSMA and MSMAA Convention.

Thursday, April 7th,
Dinner and Show - "In the Spotlight"
featuring performances by physicians & spouses. AMA-ERF Benefit
(All tax deductible) $50/person

Friday, April 8th
Tour the fascinating
Steamboat Arabia Museum.
Transportation on the Molley Trolley.
$13.50/person

Friday, April 8th
Fine dining and entertainment in the Tudor Room at the Kansas City Club
(a private gentlemen's club).
$35/person, your check is your reservation

| EVENT | COST | NUMBER ATTENDING | TOTAL COST |
|---|---|---|---|
| Thursday, April 7<br>AMA-ERF Fundraiser*<br>"In the Spotlight"<br>7:30 pm | $50/Person | | |
| Friday, April 8<br>Awards Luncheon<br>12:15 pm | $25/Person | | |
| Friday, April 8<br>Arabia Museum<br>2:15 pm | $13.50/Person | | |
| Friday, April 8<br>Dutch Treat Dinner<br>K.C. Club<br>7:30 pm | $35/Person | | |
| Saturday, April 9<br>PAC Breakfast<br>7:15 am | $15/Person | | |
| Saturday, April 9<br>Installation Luncheon<br>12 noon | $25/Person | | |
| TOTAL AMOUNT ENCLOSED | | | $ |

*I prefer that my AMA-ERF contribution go to the following medical school:

____________________________________

Please reply by completing this form and mailing by March 21st to:

Connie Ashcraft
6700 High Drive
Mission Hills, KS 66208

Name____________________________

________________________________

Address__________________________

________________________________

City_____________________________

State________Zip_____________

Phone (_____)__________________

Spouses & their Guests welcome to all activities.

**Make room reservations directly with the Westin Crown Center Hotel before March 16.
1-800-228-3000**

# The 136th MSMA Annual Convention

## April 7 - 10, 1994

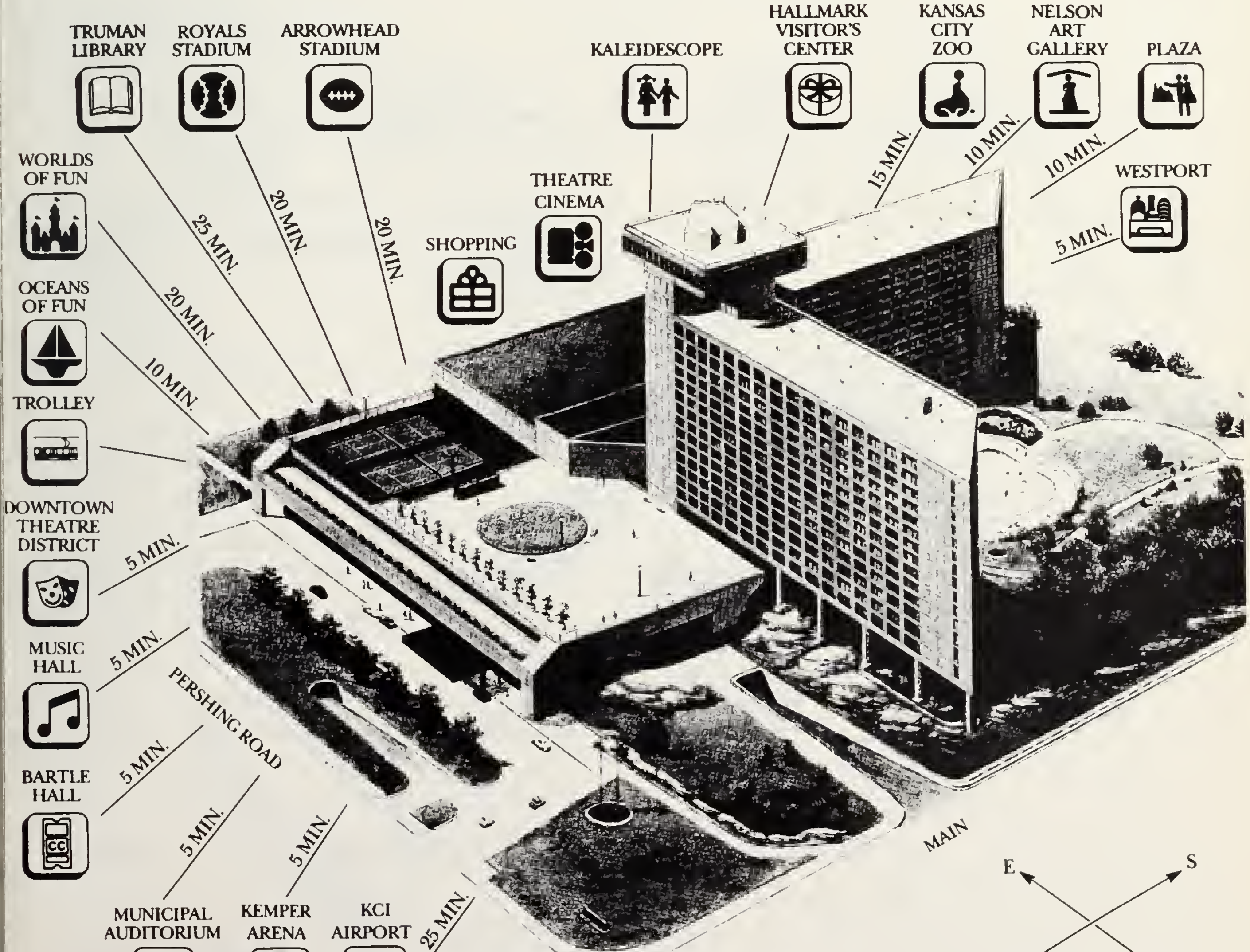
**THE WESTIN CROWN CENTER**
Kansas City

**WESTIN**
HOTELS & RESORTS

**From the North:**
I-29 South Across the Paseo Bridge. Stay on I-35 to the Broadway exit. Turn left onto Broadway and continue to 20th Street. Right onto Main to Pershing Road.

**From the South:**
Take Hwy. 71 to I-435 North continue on I-70 West and exit I-35 South to 13th Street exit. Continue on 13th Street to Grand Avenue. Turn left onto Grand to Pershing Road.

**From the East:**
I-35 South to 13th Street Exit. Continue on 13th Street to Grand Avenue. Turn left onto Grand Avenue to Pershing Road and Turn right.


TRUMAN LIBRARY
ROYALS STADIUM
ARROWHEAD STADIUM
KALEIDESCOPE
HALLMARK VISITOR'S CENTER
KANSAS CITY ZOO
NELSON ART GALLERY
PLAZA
WORLDS OF FUN
THEATRE CINEMA
WESTPORT
SHOPPING
OCEANS OF FUN
TROLLEY
DOWNTOWN THEATRE DISTRICT
MUSIC HALL
BARTLE HALL
MUNICIPAL AUDITORIUM
KEMPER ARENA
KCI AIRPORT
25 MIN.
20 MIN.
20 MIN.
20 MIN.
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PERSHING ROAD
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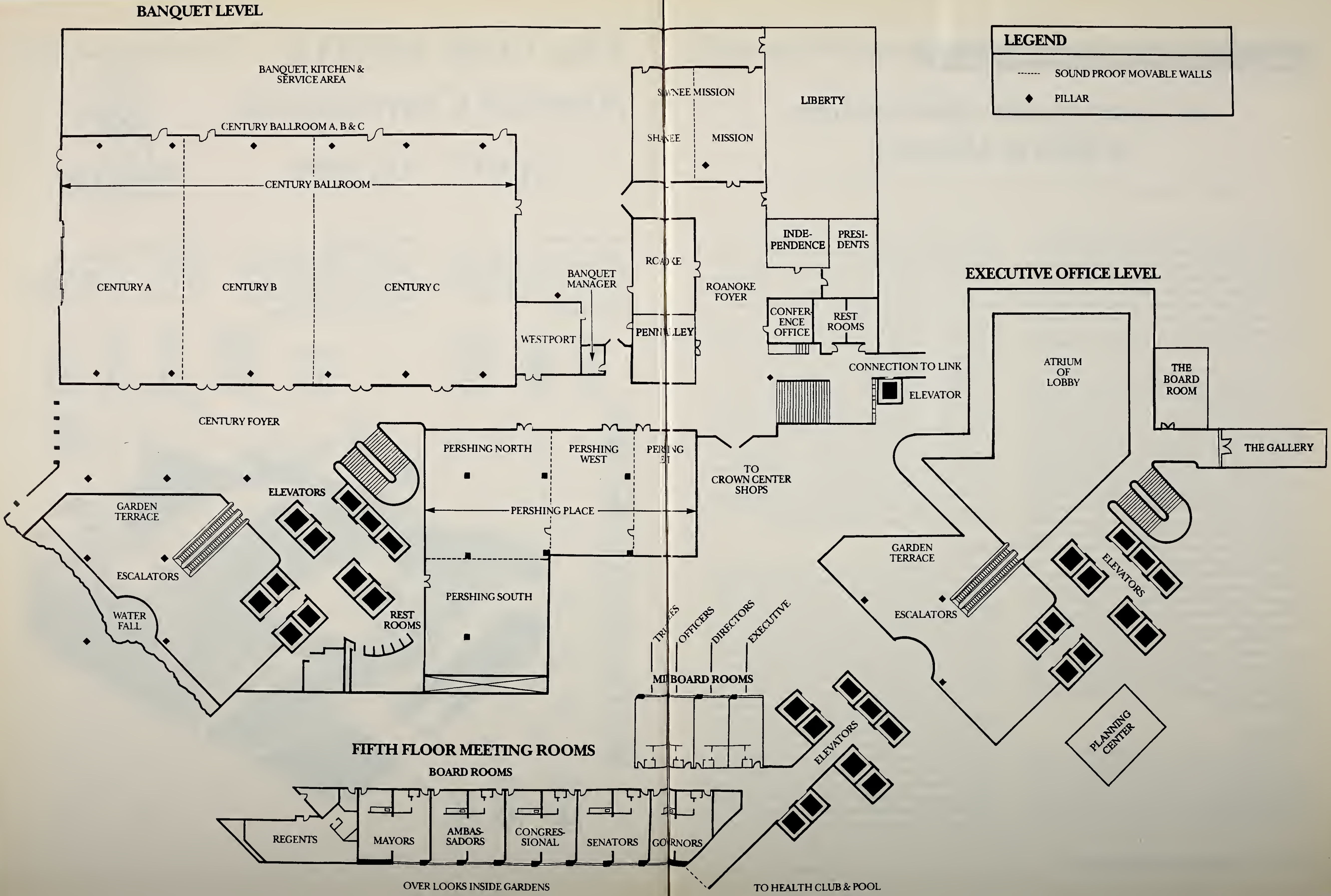

BANQUET LEVEL
LEGEND
SOUND PROOF MOVABLE WALLS
PILLAR
BANQUET, KITCHEN & SERVICE AREA
CENTURY BALLROOM A, B & C
CENTURY BALLROOM
CENTURY A
CENTURY B
CENTURY C
WESTPORT
BANQUET MANAGER
S WNEE MISSION
SHA EE
MISSION
LIBERTY
ROA KE
ROANOKE FOYER
PENN LLEY
INDE-PENDENCE
PRESI-DENTS
CONFER-ENCE OFFICE
REST ROOMS
CONNECTION TO LINK
ELEVATOR
CENTURY FOYER
PERSHING NORTH
PERSHING WEST
PER ING
PERSHING PLACE
PERSHING SOUTH
TO CROWN CENTER SHOPS
GARDEN TERRACE
ELEVATORS
ESCALATORS
WATER FALL
REST ROOMS
EXECUTIVE OFFICE LEVEL
ATRIUM OF LOBBY
THE BOARD ROOM
THE GALLERY
GARDEN TERRACE
ESCALATORS
ELEVATORS
PLANNING CENTER
TR ES
OFFICERS
DIRECTORS
EXECUTIVE
MI BOARD ROOMS
ELEVATORS
FIFTH FLOOR MEETING ROOMS
BOARD ROOMS
REGENTS
MAYORS
AMBAS-SADORS
CONGRES-SIONAL
SENATORS
GO RNORS
OVER LOOKS INSIDE GARDENS
TO HEALTH CLUB & POOL

# An Update on the Epidemiology of AIDS in Missouri

Robert H. Hamm, MD, MPH, H. Denny Donnell, Jr., MD, MPH and Wendy Watkins

**It has been 13 years since the initial report from the Centers for Disease Control and Prevention (CDC) describing the condition that came to be known as the acquired immunodeficiency syndrome (AIDS).[1] Because of the public health significance of the AIDS epidemic, an elaborate national surveillance system, involving CDC along with state and local health departments, came to be established. This surveillance system now provides detailed information about the epidemiology of AIDS in this country.**

**At the national level, through September 1993, 339,250 cases of AIDS have been reported to CDC; 204,390 of these individuals have died, for a case-fatality rate of 60.2%.[2] Human immunodeficiency virus (HIV) infection/AIDS is now the leading cause of death in American men aged 25-44, and the fourth leading cause of death for women in this age group.[3] The AIDS epidemic continues to disproportionately affect minorities. For blacks, the cumulative incidence rate is approximately 3.7 times that of whites; for Hispanics it is approximately 2.7 times that of whites. The majority of AIDS cases nationally are attributable to transmission of HIV among men who have sex with other men. However, the annual incidence of AIDS is currently rising faster among women than among men, and AIDS incidence is increasing more rapidly among persons who are reported to have acquired their infection through heterosexual contact than among persons in other exposure categories. Along with the increase in the number of cases in women, there has been a corresponding increase in the number of pre- or perinatally-acquired cases in children.[4]**

**In Missouri, AIDS has had a similar significant impact in terms of morbidity and mortality. The remainder of this report will summarize the epidemiology of AIDS in Missouri from 1982, when the first case was reported to the Missouri Department of Health (DOH), through mid-January 1994.**

## METHODS

In Missouri, physicians are required by law to report to public health authorities all diagnosed cases of AIDS. Confirmed cases of HIV infection which do not meet the AIDS case definition, as well as CD4+ lymphocyte counts on any HIV-infected person, are also required to be reported. In addition, laboratories are required to report any test result that is positive for, or suggestive of, AIDS or HIV infection. If incomplete reports are received, public health officials follow-up to obtain the missing information. All reports come to DOH's Bureau of STD/HIV Prevention, where they are entered into a combined HIV/AIDS database. HIV/AIDS Reporting System (HARS) software supplied by CDC is used to manage and analyze the data, and to provide the summaries of the data which are presented in the following section. Additional information on AIDS mortality is obtained from analysis of death certificate data conducted by the State Center for Vital Statistics.

Adult/adolescent AIDS cases discussed in this report are those meeting CDC's latest AIDS surveillance case definition, which became effective January 1, 1993. This revised definition added HIV-infected persons with CD4+ lymphocyte counts <200/µL and/or a CD4+ percent <14. Also included in the new definition were HIV-infected persons with pulmonary tuberculosis, recurrent pneumonia, or invasive cervical cancer.[5] Pediatric cases described in this report consist of individuals meeting the CDC surveillance definition for pediatric AIDS who were initially diagnosed as being infected with HIV prior to their 13th birthday.[6]

## RESULTS

Through January 20, 1994, a total of 4,881 AIDS cases have been reported to DOH; 2,496 of these individuals (51.1%) have died. During 1992, AIDS was the second leading cause of death in Missouri men 25-44 years of age. In Kansas City and Springfield, it was the leading cause of death for men in this age group, although in the latter community, 12 (42.9%) of the 28 AIDS deaths which occurred in 1992 were in inmates hospitalized at the Federal Center for Medical Prisoners. In Missouri women 25-44 years of age, AIDS was the tenth leading cause of death in 1992.

From 1982 until 1992 (the last year for which generally complete reports are available), the number of cases diagnosed in each year has continued to increase (Figure 1). Over the last 5 years of this period (1988 to 1992), the incidence of AIDS cases diagnosed has increased, on average, approximately 23% each year. The geographic distribution of AIDS cases in Missouri is shown in Figure 2. To date, AIDS cases have been reported in residents of 94 of the state's 115 counties. Of those 21 counties which have no reported cases, all are adjacent to at least one other county which has had 2 or more cases among its residents. In addition, 5 of the 21 counties with no reported AIDS cases have residents who have been reported as infected with HIV, but who have not progressed to AIDS. The AIDS epidemic has clearly been concentrated in the St. Louis and Kansas City metropolitan areas; 39.4% of all cases have been in residents of St. Louis City and St. Louis County, and 31.1% have been in residents of Kansas City. The remaining 29.4% of Missouri AIDS cases have been in individuals whose residence was outside these major metropolitan areas.

Approximately 94% of all reported AIDS cases in Missouri have occurred in males, but the percentage of female cases is continuing to increase (from 4.9% for cases diagnosed in 1986 to 6.0% for 1990 to 8.5% for 1993). Whites, comprising approximately 88% of Missouri's population, contribute 71.9% of reported AIDS cases; blacks, comprising about 11% of the state's population, contribute 24.7%; and Hispanics, comprising about 1% of the population, contribute 2.7%. The marked over-representation of AIDS cases in the latter two groups becomes especially apparent when one looks at AIDS rates per 100,000 population. Between 1988 and 1992, the average annual rate among whites was 11.3, among blacks it was 32.6, and among Hispanics it was 34.7. The disparity between whites and these minority groups is continuing to widen.

The age group showing the largest number of AIDS cases is the 30-39 year olds. However, it should be noted that 24.8% of AIDS cases were diagnosed in persons aged 20-29. Given the prolonged average incubation period for AIDS (approximately 8-10 years), many of these individuals were likely infected while in their teens.

The occurrence of cases in each of the four major exposure categories over time is shown in Figure 3. Clearly the largest numbers of cases continue to be seen in men whose risk behavior was having sex with other men; numbers of reported cases among men who have sex with men and inject drugs, injecting drug users and heterosexual contacts have been much lower. The annual numbers of reported cases for all of these exposure categories are continuing to increase.

Table 1 provides a description of AIDS cases by race, sex, and exposure category. For men, regardless of race, homosexual activity is the most common route of HIV transmission. However, for black and Hispanic men, injecting drug use is a more frequently occurring risk behavior than for white men. Specifically, 13.8% of AIDS cases in black men and 28.1% in Hispanic men are attributed to injecting drug use; whereas for white men, 3.6% of cases are classified as due to this type of exposure.

Transmission through heterosexual contact accounts for slightly more than half of the AIDS cases reported in both white and black women, 54.1% and 52.6%, respectively. For black women, injecting drug use is a more prevalent mode of transmission than for white women, being associated with 37.7% of black female cases versus 24.7% of white female cases. Only 3 AIDS cases have been reported in Hispanic women, 2 were attributed to injecting drug use and 1 to heterosexual contact.

Twenty-five (59.5%) of the 42 pediatric AIDS cases - 10 (40%) of the 25 cases in white children and 15 (93.8%) of the 16 cases in black children - have occurred in individuals whose mother is at risk for, or has, HIV infection. A recent DOH survey indicates that a high proportion of these mothers appear to be injecting drug users or sexual partners of injecting drug users.

Continued on page 134

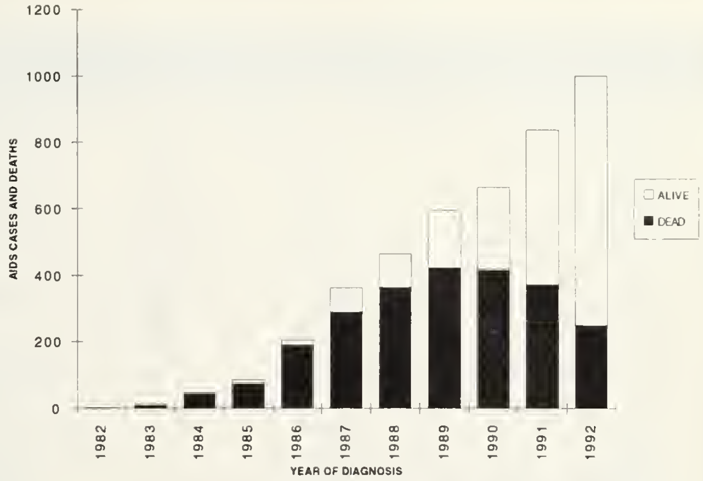


**Figure 1.** **AIDS Cases and Deaths by Year of Diagnosis, Missouri, 1982-1992.**

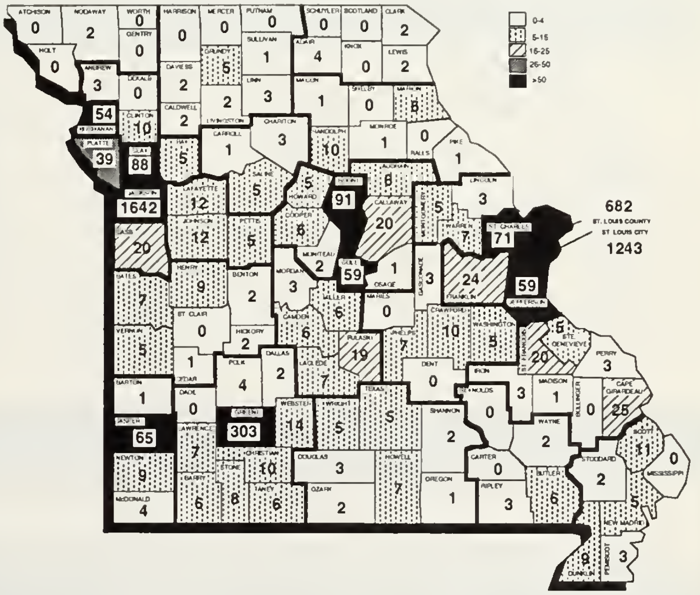
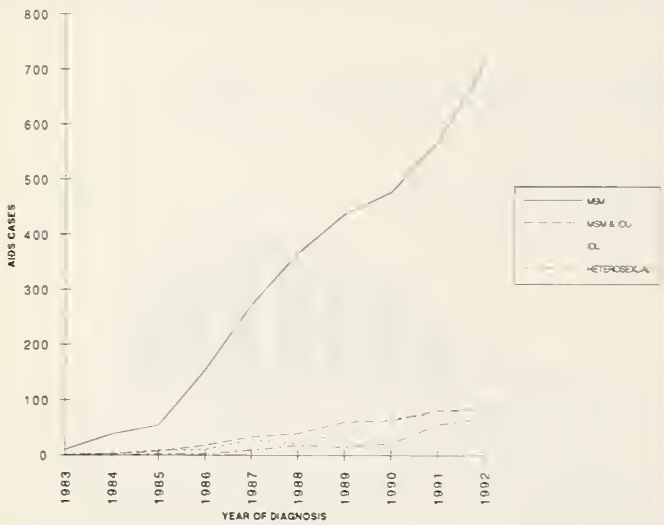


**Figure 2.** **Cumulative AIDS Cases by County of Residence, Missouri, through January 20, 1994.**



* Exposure categories: MSM = Men who have sex with men, MSM & IDU = Men who have sex with men and inject drugs, IDU = Injecting drug user, Heterosexual = Heterosexual contact

**Figure 3.** **AIDS Cases by Exposure Category* and Year of Diagnosis, Missouri, 1982-1992.**

Continued from page 133

Hemophiliacs account for 2.6% of adult/adolescent AIDS cases and 31% of pediatric cases. Over the past 5 years, an average of approximately 17 adult hemophiliac and 2 pediatric hemophiliac cases have been reported each year. Transfusion recipients make up 1.5% of adult cases and 9.5% of cases in children. On average, approximately 10 adult transfusion cases have been reported each year during the past 5 years. No pediatric cases associated with transfusion have been reported since 1985. In each of the hemophiliac and transfusion-associated AIDS cases where follow-up investigations could be performed, it appears that the HIV-contaminated blood or clotting factor products were received prior to the mid-1980s, when laboratory screening of all donated blood, along with other preventive measures to protect the blood supply, was instituted.

## DISCUSSION

The data presented above provide an overview of the current state of the AIDS epidemic in Missouri. Certain key points need to be kept in mind in interpreting this information. First, the AIDS epidemic is really a composite of many smaller epidemics occurring in different locations and in different risk groups. The overall trends seen in the data for the entire state may not reflect the trends seen in one of the smaller epidemics. Second, the new AIDS surveillance case definition described above has had the effect of increasing the numbers of more recently reported cases. Third, AIDS cases continue to be under-reported, although the completeness of reporting appears to be better in Missouri than in many other states.

Sexual contact between men is the primary route by which Missouri AIDS cases acquired their HIV infection, and the annual incidence of cases associated with this risk behavior is continuing to increase at a noticeable rate. This may indicate that the change to lower risk sexual activities among gay men, which appeared to occur in some parts of the country during the 1980's, did not occur as rapidly in Missouri.

Continued on page 136

**Table I - Cumulative AIDS Cases by Race, Sex, and Exposure Category, Missouri, Through January 20, 1994.**

| | TOTAL CASES | | | | | |
|---|---|---|---|---|---|---|
| | | | MALE | | FEMALE | |
| EXPOSURE CATEGORY | CASES | % | CASES | % | CASES | % |
| **ADULT/ADOLESCENT** | | | | | | |
| MEN WHO HAVE SEX WITH MEN | 3491 | 72.1% | 3491 | 76.8% | 0 | 0.0% |
| MEN WHO HAVE SEX WITH MEN AND INJECT DRUGS | 439 | 9.1% | 439 | 9.7% | 0 | 0.0% |
| INJECTING DRUG USE | 395 | 8.2% | 307 | 6.8% | 88 | 30.2% |
| HETEROSEXUAL CONTACT | 237 | 4.9% | 81 | 1.8% | 156 | 53.6% |
| HEMOPHILIA/COAGULATION DISORDER | 125 | 2.6% | 124 | 2.7% | 1 | 0.3% |
| RECIPIENT OF BLOOD TRANSFUSION OR TISSUE | 75 | 1.5% | 43 | 0.9% | 32 | 11.0% |
| UNDETERMINED | 77 | 1.6% | 63 | 1.4% | 14 | 4.8% |
| **TOTAL ADULT/ADOLESCENT CASES** | 4839 | 100.0% | 4548 | 100.0% | 291 | 100.0% |
| **PEDIATRIC (<13 YEARS OLD)** | | | | | | |
| MOTHER WITH/AT RISK FOR HIV INFECTION | 25 | 59.5% | 14 | 48.3% | 11 | 84.6% |
| HEMOPHILIA/COAGULATION DISORDER | 13 | 31.0% | 13 | 44.8% | 0 | 0.0% |
| RECIPIENT OF BLOOD TRANSFUSION OR TISSUE | 4 | 9.5% | 2 | 6.9% | 2 | 15.4% |
| UNDETERMINED | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| **TOTAL PEDIATRIC CASES** | 42 | 100.0% | 29 | 100.0% | 13 | 100.0% |
| **TOTAL CASES** | 4881 | | 4577 | | 304 | |

## Table I - Continued

| WHITE | MALE | | FEMALE | |
|---|---|---|---|---|
| EXPOSURE CATEGORY | CASES | % | CASES | % |
| **ADULT/ADOLESCENT** | | | | |
| MEN WHO HAVE SEX WITH MEN | 2667 | 80.4% | 0 | 0.0% |
| MEN WHO HAVE SEX WITH MEN AND INJECT DRUGS | 310 | 9.3% | 0 | 0.0% |
| INJECTING DRUG USE | 121 | 3.6% | 42 | 24.7% |
| HETEROSEXUAL CONTACT | 47 | 1.4% | 92 | 54.1% |
| HEMOPHILIA/COAGULATION DISORDER | 109 | 3.3% | 1 | 0.6% |
| RECIPIENT OF BLOOD TRANSFUSION OR TISSUE | 32 | 1.0% | 25 | 14.7% |
| UNDETERMINED | 30 | 0.9% | 10 | 5.9% |
| **TOTAL ADULT/ADOLESCENT CASES** | 3316 | 100.0% | 170 | 100.0% |
| **PEDIATRIC (<13 YEARS OLD)** | | | | |
| MOTHER WITH/AT RISK FOR HIV INFECTION | 7 | 35.0% | 3 | 60.0% |
| HEMOPHILIA/COAGULATION DISORDER | 11 | 55.0% | 0 | 0.0% |
| RECIPIENT OF BLOOD TRANSFUSION OR TISSUE | 2 | 10.0% | 2 | 40.0% |
| UNDETERMINED | 0 | 0.0% | 0 | 0.0% |
| **TOTAL PEDIATRIC CASES** | 20 | 100.0% | 5 | 100.0% |
| **TOTAL CASES IN WHITES** | 3336 | | 175 | |

| BLACK | MALE | | FEMALE | |
|---|---|---|---|---|
| EXPOSURE CATEGORY | CASES | % | CASES | % |
| **ADULT/ADOLESCENT** | | | | |
| MEN WHO HAVE SEX WITH MEN | 738 | 68.5% | 0 | 0.0% |
| MEN WHO HAVE SEX WITH MEN AND INJECT DRUGS | 116 | 10.8% | 0 | 0.0% |
| INJECTING DRUG USE | 149 | 13.8% | 43 | 37.7% |
| HETEROSEXUAL CONTACT | 30 | 2.8% | 60 | 52.6% |
| HEMOPHILIA/COAGULATION DISORDER | 10 | 0.9% | 0 | 0.0% |
| RECIPIENT OF BLOOD TRANSFUSION OR TISSUE | 9 | 0.8% | 7 | 6.1% |
| UNDETERMINED | 26 | 2.4% | 4 | 3.5% |
| **TOTAL ADULT/ADOLESCENT CASES** | 1078 | 100.0% | 114 | 100.0% |
| **PEDIATRIC (<13 YEARS OLD)** | | | | |
| MOTHER WITH/AT RISK FOR HIV INFECTION | 7 | 87.5% | 8 | 100.0% |
| HEMOPHILIA/COAGULATION DISORDER | 1 | 12.5% | 0 | 0.0% |
| RECIPIENT OF BLOOD TRANSFUSION OR TISSUE | 0 | 0.0% | 0 | 0.0% |
| UNDETERMINED | 0 | 0.0% | 0 | 0.0% |
| **TOTAL PEDIATRIC CASES** | 8 | 100.0% | 8 | 100.0% |
| **TOTAL CASES IN BLACKS** | 1086 | | 122 | |

| HISPANIC | MALE | | FEMALE | |
|---|---|---|---|---|
| EXPOSURE CATEGORY | CASES | % | CASES | % |
| **ADULT/ADOLESCENT** | | | | |
| MEN WHO HAVE SEX WITH MEN | 71 | 55.5% | 0 | 0.0% |
| MEN WHO HAVE SEX WITH MEN AND INJECT DRUGS | 8 | 6.3% | 0 | 0.0% |
| INJECTING DRUG USE | 36 | 28.1% | 2 | 66.7% |
| HETEROSEXUAL CONTACT | 4 | 3.1% | 1 | 33.3% |
| HEMOPHILIA/COAGULATION DISORDER | 0 | 0.0% | 0 | 0.0% |
| RECIPIENT OF BLOOD TRANSFUSION OR TISSUE | 2 | 1.6% | 0 | 0.0% |
| UNDETERMINED | 7 | 5.5% | 0 | 0.0% |
| **TOTAL ADULT/ADOLESCENT CASES** | 128 | 100.0% | 3 | 100.0% |
| **PEDIATRIC (<13 YEARS OLD)** | | | | |
| MOTHER WITH/AT RISK FOR HIV INFECTION | 0 | 0.0% | 0 | 0.0% |
| HEMOPHILIA/COAGULATION DISORDER | 0 | 0.0% | 0 | 0.0% |
| RECIPIENT OF BLOOD TRANSFUSION OR TISSUE | 0 | 0.0% | 0 | 0.0% |
| UNDETERMINED | 0 | 0.0% | 0 | 0.0% |
| **TOTAL PEDIATRIC CASES** | 0 | 0.0% | 0 | 0.0% |
| **TOTAL CASES IN HISPANICS** | 128 | | 3 | |

Continued from page 134

The numbers of AIDS cases attributable to injecting drug use and heterosexual contact have remained much lower, but there continue to be increases in the yearly numbers of diagnosed cases associated with these risk behaviors. If these trends continue, these routes of transmission will, in time, come to contribute significant numbers of new AIDS cases.

Associated with the increase in AIDS cases among injecting drug users and heterosexual contacts is the increase in cases among women, who represent a growing percentage of the state's cases. While pediatric cases acquired through vertical transmission from an infected mother have not shown recent increases, the growing number of cases in women raises the concern that, in the future, more cases in children will be occurring.

At the time a diagnosis of AIDS is made, the patient has likely been infected with HIV for at least several years. Consequently, the epidemiology of AIDS cases may not reflect the current epidemiology of new HIV infections. However, the present AIDS data do indicate that the epidemic in Missouri has spread to certain other populations in addition to men who have sex with men. Among the groups for whom there is particular concern are injecting drug users, persons having heterosexual contact with these drug users, and women who have sexual contact with bisexual men. Prevention programs, while continuing to target men who have sex with men, must also reach these latter groups. In addition, prevention programs must reach those minority populations which are disproportionately affected by the epidemic.

The total number of HIV-infected persons in the state is unknown. Using various methods, DOH has estimated the number to be in the range of 12,000-15,000 individuals (nationally, the estimate remains at approximately 1,000,000 infected persons).[7] Many of these individuals are unaware of their infection and their consequent ability to transmit HIV to their sexual or needle-sharing partners. Physicians should conduct careful risk assessment on all patients, and strongly encourage voluntary testing of those who may have had reasonable opportunity for exposure to HIV.

Over the past 11 years, HIV disease, with AIDS as its end-stage manifestation, has caused very significant morbidity and mortality among Missouri residents. Based on the trends noted above, there is likely to be, at least for the foreseeable future, a continuation of this process. Advances in the understanding of HIV disease and its complications have resulted in the development of measures that can prevent or delay the onset of opportunistic infections, postpone deterioration of the immune system, and improve the quality of life of HIV-infected persons.[8] However, given the absence of either an effective vaccine or effective long-term treatment modalities, the primary public health emphasis must remain on preventing new HIV infections from occurring.

Physicians and other health care providers can play a vital role in this effort through the early identification of infected persons, and the provision of prevention education, counseling, and support to these individuals. Such education and counseling should additionally be provided to uninfected persons who are engaging in high risk behaviors. The prompt reporting of each case of HIV infection/AIDS to the appropriate public health agency will help assure that the sexual and needle-sharing partners of infected persons are properly evaluated. Following the receipt of such a report, specially trained and experienced public health personnel may, with the physician's permission, contact the infected individual to obtain information about his or her partners. These personnel will then provide whatever assistance is required for partner notification to take place. Finally, physicians may be able to decrease the risk of HIV transmission through the prompt diagnosis and proper treatment of other sexually transmitted diseases, since the latter have been shown to significantly enhance the efficiency of transmission of HIV.[9]

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## The Authors

The authors are from the Missouri Department of Health in Jefferson City, Missouri. Dr. Robert Hamm is a medical epidemiologist in the Office of Epidemiology. Dr. H. Denny Donnell, Jr. is State Epidemiologist and Director of the Office of Epidemiology. Wendy Watkins is the HIV/AIDS Surveillance Coordinator in the Bureau of STD/HIV Prevention.

Technical Assistance was provided by Jeff Elliott and Joann Feltrop.

**Reprint requests to:**

**Dr. Robert Hamm**
**Office of Epidemiology**
**Missouri Department of Health**
**1730 East Elm Street, P.O. Box 570**
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# Managing Physician Practice Patterns: Providing Information Feedback to Improve Quality Care & Reduce Cost

Douglas S. Harr, MS and Andrew Balas, MD, PhD

**The current movement for health care reform has inspired the search for new and better ways to improve the quality of health care and contain cost. Hospital and the health services management professionals have increasingly embraced the methodology of assessing physician practice patterns to achieve these goals. One such method, computerized feedback systems, may open a door to the future that will allow physicians to compare their practice patterns with those of their peers. Such systems may enable physicians to modify their practice patterns, improve quality care and reduce cost.**

## QUALITY CARE ISSUES

Informational feedback systems provide computerized feedback on quality care. They can report periodic evaluation of past patient care activities to influence future decision-making. Information feedback can be provided on a variety of patient care activities to include: prescriptions, treatment plans, and laboratory tests. Information feedback has been successful in modifying practice patterns, improving quality care and decreasing excessive utilization of health resources.

There are many medical practice variations that exist within health care today. These variations in physician practice patterns can result in low levels of efficiency and effectiveness.[1] Research has determined that although physicians often agree with established medical practice guidelines they seldom make changes in their own individual practice patterns based on these guidelines.[2-4] The ambiguity surrounding appropriate treatment paths has not provided for any standardization of health care resource utilization.

Such variations in physicians practice patterns can be attributed to a variety of factors to include physician age, specialty mix, and clinical experience.[1,5] These variations can lead to inconsistencies in practice patterns that reduce productivity, efficiency and cost effectiveness.

Physicians maintain a high degree of control over resource utilization. Virtually every aspect of health care is driven by the physicians' decisions and their behavior has a direct impact on health care cost,[6] since approximately 70% of medical costs are directly influenced by physicians' decisions. Typical resources used by physicians include the ordering of tests, treatment plans, prescriptions, referrals, and hospitalization.

There is a tremendous need to develop effective treatment patterns that the majority of physicians can adhere to. Established treatment patterns can identify what medical resources are needed in order to provide the best care for the patients with the least amount of resource waste. If such treatment patterns are built on the basis of clinical quality indicators, they can ensure that patients receive quality treatment. Such standardization can help avoid redundant and unnecessary medical testing and inefficient use of resource allocations. Most physicians, however, do not have the needed mechanisms to generate useful cost effective summary reports that can enable them to contain cost and improve efficiency.

## FEEDBACK FOR IMPROVING QUALITY & REDUCING COST

Providing informational feedback on the quality of care is one strategy physicians and the health services management community can use to influence practice patterns. Informational feedback has been successful in modifying practice patterns, improving quality of care and decreasing utilization of health care resources.[7] Successful programs have been used to encourage health care providers to prescribe generic drugs and to follow recommended clinical guidelines. Empirical research has indicated that health care providers are capable of modifying their practice patterns when provided with reliable information about how they compare to the practice styles of their colleagues.[8-10]

Modern feedback programs can be broken into two major categories: 1) feedback based on stated objectives and 2) feedback without specified objectives. Programs that are based on stated objectives provide measurable mileposts for evaluating progress.[11] Programs that do not specify objectives provide information without interpretations or suggestions. These programs may provide information on utilization rate variations, outcomes, costs, and negative effects. The unspecified objective approach makes the assumption that the information provided will encourage physicians to develop quality improvement goals and make changes in their practice styles as needed.

The delivery of feedback information can be organized with three primary mechanisms. First, the *arrangements for feedback* are made and include criteria development, special training programs and/or mailed information (criteria, articles). Secondly, *channels of feedback* are established to include personalized reports, summaries and group performance reports. Lastly, *feedback follow-up* is done to review informational findings, this can be done in meetings with health care providers or in one-on-one discussions.

These days computerized feedback systems can be used in diverse clinical areas. Expert systems can be combined with feedback systems to create the best combinations of feedback methods. These quality feedback expert systems of the future promise to provide support for the implementation of clinical practice guidelines, specification of corporate and individual quality improvements objectives, peer comparisons, and follow-up of previously set objectives by highlighting discrepancies between objectives and actual proactive patterns. Currently, a number of clinical trials testing computerized feedback interventions have been conducted in several areas such as average prescription charges, laboratory test utilization, peer comparison on compliance of established treatment guidelines, and peer comparison on prescribing costs. We can look forward to the development and application of these new systems that have the potential to make significant advancements in improving quality care and reducing cost.

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## ACKNOWLEDGEMENT

This article was supported in part by grant number LM07089 from the National Library of Medicine. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the National library of Medicine.

## The Authors

**Douglas S. Harr, MS,** is a pre-doctoral fellow in Medical Informatics at the University of Missouri-Columbia. He is a Health Care Administrator and a member of the American College of Healthcare Executives. His current research interest is Individualized Education with Peer Comparison Interventions: Improving the Quality of Health Care.

**E. Andrew Balas, MD, PhD,** is an assistant professor in the Department of Health Services Management of the School of Medicine at the University of Missouri-Columbia. He has current research funding in medical informatics and serves as a faculty member in the Medical Informatics Group. He is the Principal Investigator for current research on Individualized Feedback to Implement Clinical Guidelines.

# Mid-Esophageal Traction Diverticulum: Rare Cause of Massive Upper Gastrointestinal Bleeding

Leslie E. Tucker, MD, Thomas Aquino, MD, and William Sasser, MD

**Traction diverticula of the mid-esophagus are usually incidental findings on barium swallow or upper endoscopy. They are thought to arise secondary to adjacent inflammation in the mediastinum, usually from granulomatous infection such as histoplasmosis. They are usually asymptomatic. Rarely, erosion or extension of the inflammatory process into the adjacent lung or bronchial arteries can result in clinical symptoms such as pneumonia or gastrointestinal bleeding. Diagnosis is often delayed due to the rarity of clinical symptoms. We present a case of massive upper gastrointestinal bleeding due to a mid-esophageal diverticulum.**

Traction diverticula of the mid-esophagus are usually incidental findings on barium swallow or esophagoscopy. They occur as a result of inflammatory reactions in the mediastinum with secondary adhesions. They are as a rule asymptomatic. Rarely extension of the inflammatory reaction to adjacent lung, lymph nodes or blood vessels can result in clinical symptoms such as pneumonia, bronchoesophageal fistula, or gastrointestinal hemorrhage.[1,2] Diagnosis is often delayed. We present a case of massive upper gastrointestinal bleeding due to an eroding mid-esophageal diverticulum.

## CASE PRESENTATION

L.V., a 56-year-old woman, presented to St. John's Mercy Hospital with chest pain, painful swallowing and hematemesis. One week prior to admission, the patient had developed painful swallowing after eating roast beef. A barium swallow revealed an isolated mid-esophageal diverticulum, a small hiatal hernia, a probable lower esophageal ring and gastroesophageal reflux (Fig. 1). The patient also had developed a non-productive cough, and was having episodes of mid-sternal chest pain which radiated into the back. She was placed on erythromycin succinate 333 mg three times daily for probable bronchitis.

On the day of admission, the patient developed severe chest pain going into the back after eating some chicken broth and cottage cheese. Nausea and vomiting, associated with hematemesis of 3 cups of bright red blood and diaphoresis followed. Past history was unremarkable. The patient was a practicing Jehovah's Witness and did not wish to have any blood transfusions.

Physical examination revealed the patient to be pale, diaphoretic and in obvious acute distress. Her blood pressure was 60/0 and her pulse was 120 beats per minute. Examination of the heart, lungs and abdomen was normal. Her blood pressure normalized with infusion of normal saline. The patient was admitted to the intensive care unit.

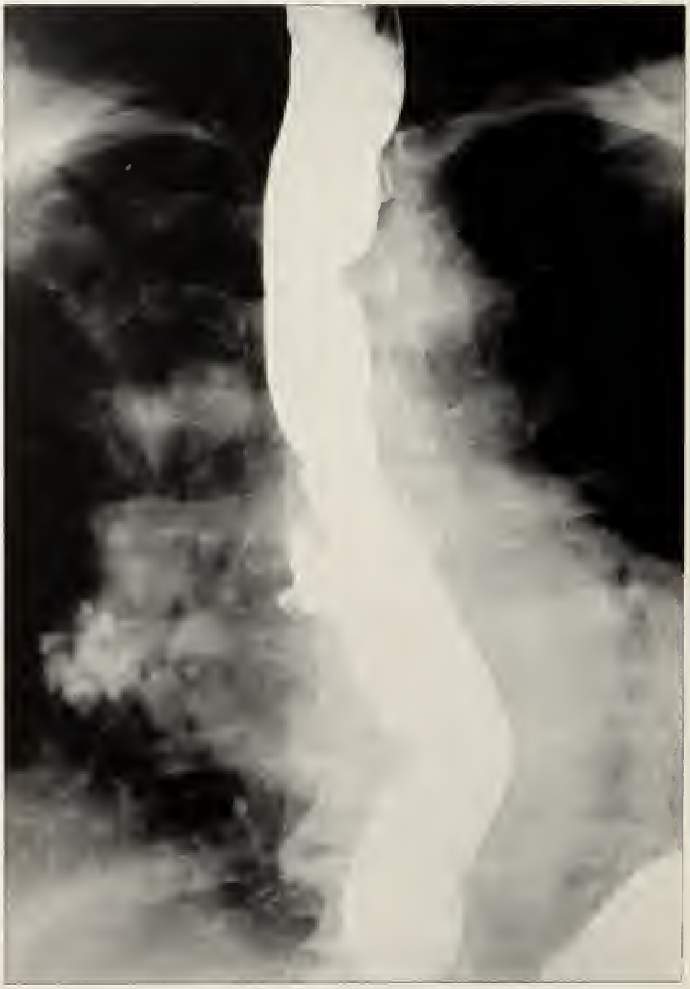

FIGURE 1. **Barium Swallow showing mid-esophageal diverticulum.**

Laboratory values revealed a hemoglobin of 9.1 gm/dl and a hematocrit of 27%. Her leukocyte count was 12,100 cells/mm with 74% neutrophils. Her prothrombin time was prolonged to 14.5 seconds but corrected to normal with vitamin K.

Admission chest-x-ray showed infiltrates in the right lower and right middle lobes, either atelectasis or pneumonia.

Twelve hours after admission, the patient developed recurrent hematemesis of greater than 500 cc of blood. Her blood pressure fell to 76/44. After rapid volume resuscitation, an emergency esophagogastroduodenoscopy (EGD) was normal except for a mid-esophageal diverticulum with active bleeding and an adherent clot (Fig. 2). The patient was transferred to the thoracic surgery service where a repeat EGD was done with similar findings. The patient underwent a right thoracotomy with excision of the mid-esophageal diverticulum. The diverticulum was found at the area of the carina with associated inflammatory lymph nodes. Postoperative hemoglobin was 7.2 gm% and hematocrit 21%. She was given erythropoietin 10,000 units subcutaneously daily. The pneumonia was treated successfully with antibiotics. She recovered slowly and was discharged. One year later, the patient has had no further bleeding and has a normal hemoglobin.

## PATHOLOGY

The specimen consisted of a 2.2 cm by 2.3 cm piece of esophageal wall having at it's center a diverticulum which measured 0.7 cm in diameter, 0.9 cm in length. The diverticulum, as well as the surrounding esophageal mucosa were lined by mature stratified squamous epithelium which showed focal hyperplastic changes. At the bottom of the diverticulum, the mucosa was ulcerated. At this level, granulation tissue was covered by an acute inflammatory exudate. A major artery was not identified on the ulcer base, however, a small artery was noted in the vicinity of the ulcer. The diverticulum was surrounded by scar tissue, where focal calcification was noted. Two lymph nodes were encased within the scar, one of them showing old inactive caseating granulomas.

Pathologic Diagnosis: Traction esophageal diverticulum, secondary to old granulomatous lymphadenitis. Ulceration of diverticulum.

## DISCUSSION

Mid-esophageal diverticula usually develop on the right side, in a subcarinal position. They are often referred to as traction diverticula. Some cases are congenital in origin but the majority are acquired following inflammatory lesions in the mediastinum which secondarily affects the esophageal walls.[1,3] In it's mid position, the esophagus lies in the immediate vicinity of pericarinal mediastinal nodes. Granulomatous inflammation, due to tuberculosis or histoplasmosis may affect these nodes and lead to significant scar tissue formation which involves both the nodes and the surrounding soft tissues. The wall of the esophagus is often involved in these scars. The pathologic findings of the present case support the concept that retraction from old granulomatous scars leads to the development of traction diverticulum of the esophagus.[3] The coexistence of an esophageal motor disorder has also been postulated as a possible contributing cause in the development of these diverticula.[4,5,6,7]

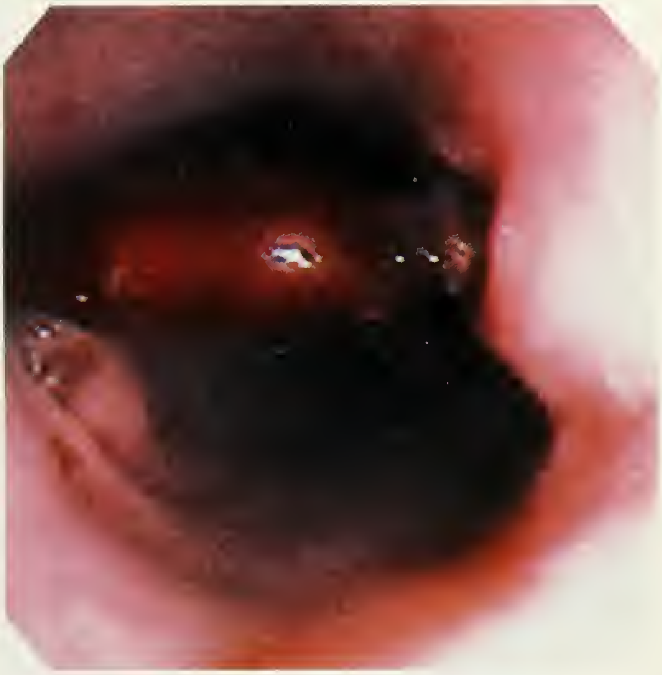

FIGURE 2. Fresh clot arising from mid-esophageal diverticulum.

Mid-esophageal diverticula are usually asymptomatic since the sacs are small, have wide necks and drain easily. Complications, however, rarely occur and may lead to their discovery. Although food entrapment in the diverticulum is uncommon, extrinsic pressure on the esophagus by mediastinal inflammatory lesions may cause obstruction.[8] When enlarged and inflamed lymph nodes erode into the esophagus and break down, fistulous communications with the trachea and bronchi may develop. Recurrent pneumonia, due to a bronchoesophageal fistula has been reported.[9,10,11,12] The presence of such a fistula may be suggested by coughing episodes after swallowing. Fistulous communication with the pericardium, pleural cavity, aorta or superior vena cava may also occur. Erosion of blood vessels may result in upper gastrointestinal hemorrhage. Such hemorrhage can be abrupt, sudden and rapidly fatal if erosion occurs into a major vessel, such as the superior vena cava

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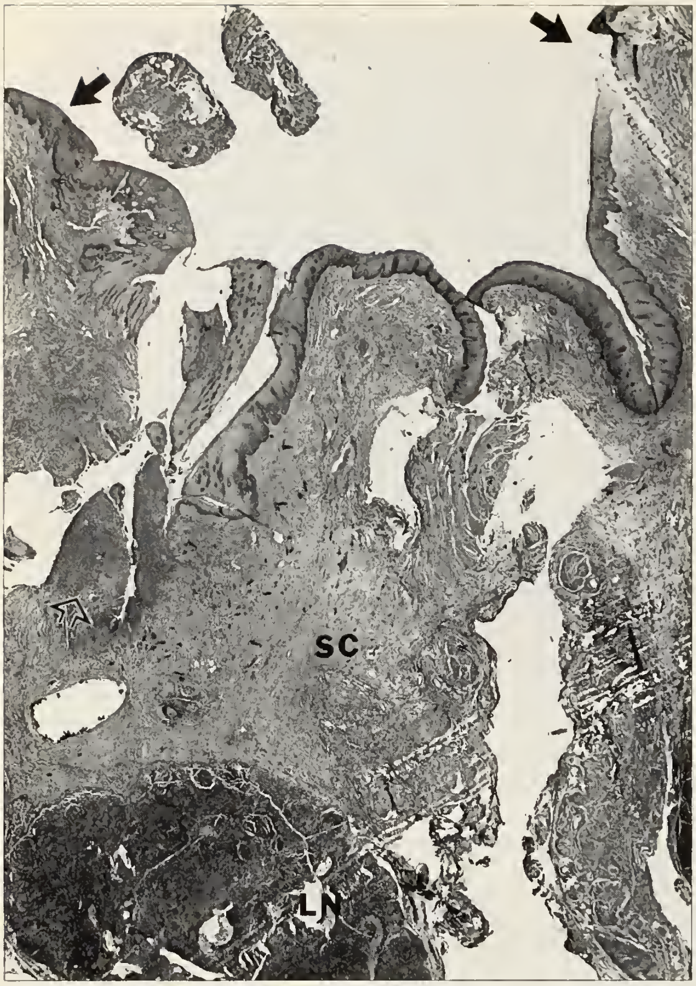

**FIGURE 3. Esophageal traction diverticulum and associated scar tissue. Bold arrows: Esophageal opening of diverticulum. Clear arrows: Ulcerated area at bottom of diverticulum, covered by exudate. SC: Scar tissue. LN: Lymph nodes.**

**Continued from page 139**

or aorta.[13,14,15] Fortunately, most cases of bleeding are due to erosion of smaller bronchial arteries, or vessels in the esophageal wall.[16]

Since mid-esophageal diverticula are usually thought not to be of clinical significance, the diagnosis may not be considered. The two cases of fatal hemorrhage into the superior vena cava and aorta both presented with fever and pulmonary symptoms as in our case. In both instances, the cases were prolonged and the diagnosis was not considered. Diagnosis in our case was made by upper endoscopy with the observation of active bleeding emanating from the diverticulum. Endoscopic thermal therapy has not been reported. Endoscopic treatment would be difficult due to inaccessibility of the bleeding vessel within the diverticulum, as well as the thinness of the esophageal wall and lack of serosa. Angiography may be helpful in some cases. Surgical treatment is standard therapy, consisting of simple surgical excision with closure of any involved lung or blood vessels.[17] An esophagomyotomy and anti-reflux operation may also be needed if the patient has an associated motility disorder.[18]

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## The Authors

Dr. Tucker is from the Division of Gastroenterology at St. John's Mercy Hospital. Dr. Aquino is from the Division of Pathology and Dr. Sasser is from the Division of Thoracic Surgery at St. John's Mercy Medical Center.

**Reprint requests to:** **Dr. Tucker**
**St. John's Mercy Hospital**
**200 Madison Avenue**
**Washington, Missouri 64090**

# PSA SYNDROME

S. D. Madduri, M.D.

"Are you sure ... Doc?," a combination of disbelief and disappointment reflecting in his voice, the elderly gentleman continued, "Let me tell you Doc! I am 68 and I worked hard all my life. I was never sick and I never took a day off till I retired two years ago."

Howard (not his real name) went through the prostate cancer screening program that was sponsored nationwide by the American Cancer Society and the American Prostate Cancer Council. Though the examination of his prostate itself was not remarkable, his Prostate Specific Antigen (PSA), the tumor marker for prostate cancer, came back as 24, a significant elevation from the norm. So I called Howard and he and his wife came over to discuss this further.

"Howard," I tried to calm him down with a reassuring voice, "No one is trying to tell you that you have cancer. Normal PSA is below 4 and any reading above 10 is significant. Yours is 24. This is highly suggestive and I don't think we can ignore it completely. You are young and in excellent health. People like you are the ones that will benefit from early diagnosis of prostate cancer and prompt treatment. Anyway, we need to do another test before we can definitely say whether or not you have cancer."

Howard and his wife agreed for Transrectal Ultrasound and prostatic biopsy.

The biopsy was reported as cancer, and the metastatic workup was negative, indicating that the cancer was organ confined and did not spread outside the prostate.

I had another long session with Howard and his wife regarding the treatment options available including observation, Radical Prostatectomy and Radiotherapy. He and his wife were visibly disturbed at the prospects of radical surgery. As I expected, couple of days later he called me saying that he and his wife decided to go ahead with Radiotherapy.

I consulted our local Radiotherapist and made arrangements for Howard to have external irradiation to his prostate and pelvis in view of significantly high PSA.

Howard did not tolerate radiotherapy well. During the later part of the treatment, he experienced severe bladder irritative symptoms with intermittent episodes of gross hematuria and urinary retention. He needed a Foley catheter repeatedly and made frequent visits to the emergency room. I tried to treat him conservatively with medications. But, he continued to suffer episodic retention, necessitating a Foley catheter.

As the catheter was getting very uncomfortable, he decided to go ahead with Transurethral Resection (TUR) of the prostate.

Howard underwent an uneventful TUR of the prostate. On the second postoperative day the Foley was removed and he started voiding well and I told him he could go home the next day. He and his wife shared a deep sigh of relief and thanked me for staying with him through his long ordeal. It was my turn to feel relieved. Whenever I saw Howard, I remembered him as the cheerful, healthy gentleman that came for the cancer screening. I felt unhappy at the not too pleasant turn of events and what he went through the last few weeks. I was glad however, that he was doing well and was ready to go home.

That night I received a call from the hospital that Howard was not feeling well and was complaining of chest pains. I advised the nurse to get the internist on call, and by the time I rushed to the hospital, my patient was hypotensive and diaphoretic.

The internist suspected pulmonary embolism and transferred him to the intensive care unit. Later on, the embolism was confirmed by the lung scan and he was anticoagulated.

Howard did well again. His condition improved and after three days of stay in the intensive care, he was transferred back to the floor. The internist prom-

Continued on page 144

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ised Howard that he could be home in a couple of days. The day before his release, I stopped by his room, expressed relief that he was getting to go home. Howard lost considerable weight during the last few weeks and he looked pale and tired. His dry lips parted with a weak gesture and a smile appeared on his wasted face. His wife thanked me again and I could see a sense of gratitude in his glazed eyes.

I went to the next floor to see a consult, when I heard the operator's hurried voice announcing *Code blue* in room 212. The room number sounded rather familiar. *God, it was Howard's room.* I ran like a mad person.

By the time I reached 212, there were a host of medical personnel in that room working hard on Howard. "After you left, he got up and went to the bathroom and collapsed," his wife said in a grief stricken voice. I advised her to wait in the nurses' lounge and walked into the patient's room.

After 30 minutes of frantic efforts to save his life, the medical team gave up. The internist walked out and told me that the patient must have suffered another massive embolus.

Howard was pronounced dead.

The sad saga of the tragic events during the last few weeks quickly passed in front of my eyes. I still vividly remembered Howard as a healthy gentleman bubbling with life when I first saw him. His words, "Let me tell you Doc! I was never sick in my life," reverberated in my ears. Had he not come in that day for the screening, he would have been alive today. Probably, the prostate cancer I diagnosed could be the *latent* cancer, and would have stayed *dormant* for the rest of his life. Is Howard a victim of *overzealous* practice of *high tech* medicine? Considering the large number of Radiotherapies and TURs of the prostates, Howard's death may be statistically insignificant, not to mention acceptable. But to the family the loss is significant and irreplaceable. His wife lost her lifetime partner and his children lost their caring and devoted father.

With a heavy heart and a tear drop trying to trickle out of the corner of my eye, I slowly moved towards the nurses' lounge to break the news to Mrs. Howard. ■

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# IN MEMORIAM

■ **Melvin C. Bowman, MD,** Neosho, Missouri, died January 10, 1994, at age 84. Dr. Bowman received his medical degree at the University of Arkansas in 1933. He began his practice in Neosho in 1935. Dr. Bowman co-owned the Sale-Bowman Hospital, built in 1937. He retired in 1961. Dr. Bowman was a member of the Ozark Medical Society, the Missouri and Arkansas State Medical Associations, the American Medical Association, Southern Medical Association, and the American Society of Abdominal Surgeons. He was a charter member of the American Academy of General Practice.

■ **Joseph C. Edwards, MD,** University City, Missouri, died January 9, 1994, at age 84. Dr. Edwards received his medical degree at Harvard University in 1934. He worked with the renowned cardiologist Paul Dudley White at Massachusetts General Hospital. During War World II, Dr. Edwards was chief of cardiovascular medicine for the Army's 21st General Hospital, a field hospital operating close to the front lines in the African, Middle Eastern and European war theaters. He received the Army's Legion of Merit. In 1939, he became the Eli Lilly Fellow in Pneumonia at Washington University. Dr. Edwards was an assistant professor of clinical medicine at Washington University from 1939 to 1960. He once directed the High Blood Pressure Clinic at St. Luke's Hospital. In 1960 he wrote *Management of Hypertensive Diseases*. Dr. Edwards continued to practice at Barnes Hospital until retirement in 1988. He was elected a fellow of the Royal Society of Medicine in London in 1965. He was president of the St. Louis Metropolitan Medical Society in 1970. Dr. Edwards was a member of the Central Society for Clinical Research, the American College of Physicians, the American Society of Internal Medicine, and The Endocrine Society.

■ **Phillip H. Halperin, MD,** Prairie Village, Kansas, died January 12, 1994, at age 84. Dr. Halperin received his medical degree at the University of Wisconsin in 1933. He was an Army veteran of War World II. Dr. Halperin was a surgeon in Kansas City for 51 years, retiring in 1985. He was a clinical professor of surgery at the University of Missouri-Kansas City and an assistant clinical professor of surgery at the University of Kansas until 1989. Dr. Halperin was past chairman of the surgery department at Menorah Medical Center. He was a diplomate of the American Board of Surgery, a member of the American College of Surgeons, The Southwestern Surgical Congress, International College of Surgeons, Pan-Pacific Surgical Association, Missouri Surgical Society, American Physicians Fellowship, Inc., the Metropolitan Medical Society of Greater Kansas City, and the American Medical Association. He was past president of the Southwest Clinical Society and a medical adviser for the Midwest Research Institute.

■ **William E. Holt, MD,** Warson Woods, Missouri, died January 16, 1994, at age 73. Dr. Holt received his medical degree at the University of Pennsylvania in 1944. He served in the Army Medical Corps in Europe from 1946 to 1948. He returned to Philadelphia where he taught at the University of Pennsylvania and had a private practice. He joined the St. Louis Psychoanalytic Foundation and the psychiatry faculty at St. Louis University in 1964. He was associated with the St. Louis Psychoanalytic Institute since its founding and practiced there until his retirement in 1989.

■ **Edward H. Klein, MD,** Prairie Village, Kansas, died January 22, 1994, at age 84. Dr. Klein received his medical degree at the University of Kansas in 1934. He was a Navy veteran of World War II. Dr. Klein was a general surgeon at St. Luke's Hospital for 40 years, retiring in 1975. He was a member of the Missouri State Medical Association, The Southwestern Surgical Congress and the American College of Surgeons.

■ **Howard J. McAlhany, MD,** Springfield, Missouri, died December 15, 1993, at age 75. Dr. McAlhany received his medical degree at the University of South Carolina in 1943. During War World II, he served in the Army as Battalion Surgeon of the 13th Airborne Division in France. He practiced medicine in South Carolina before moving to Springfield in 1955 to begin neurosurgery practice. Dr. McAlhany was a Fellow of the American College of Surgeons, a member of the Southern Medical Association, Southern Neurosurgical Society, Congress of Neurological Surgeons, The American Association of Neurological Surgeons and the Harvey Cushing Neurosurgical Society. He was president of the Greene County Medical Society in 1970, and served as chairman of the Missouri State Medical Association political committee and a delegate to the American Medical Association. He was chief of staff at St. John's Hospital and chairman of the Missouri Medical Insurance Company. He had been the medical advisor and Ozarks area chairman of the Muscular Dystrophy Association. He headed a delegation of Missouri medical leaders that toured Europe and was a physician delegate to China.

■ **Gene B. Starkloff, MD,** St. Louis, Missouri, died January 11, 1994, at age 79. Dr. Starkloff received his medical degree at Washington University in 1939. He commanded the military detachment and served the U.S. Embassy as assistant military attaché in Rio de Janeiro during War World II. He taught surgery at St. Louis University and was one of the pioneers in intestinal bypass surgery for extremely overweight people. He retired in 1977. Dr. Starkloff was a member of The Southwestern Surgical Congress, American College of Surgeons, Western Surgical Association and Society for Surgery of the Alimentary Tract.

# Sex Ed Success

Craig Carmichael, MSMA Student Section Chairman

In the December issue of *Missouri Medicine*, I made a case for the need to increase efforts in the mass media, communities, and schools to help students develop the skills they need to abstain from sex and to make abstinent sexual behavior more socially acceptable. I cited strong evidence of the ineffectiveness of condom-only attempts at sex education and described numerous efforts to promote abstinence which have proven very effective at reducing STDs and unwanted pregnancies. I also showed that many students do not want to have unwanted pregnancies. I also showed that many students do not want to have sex, but lack the skills and self-confidence to stand up for themselves. The article is fairly extensive, with thirteen of the most important citations regarding sex education and I recommend the article to any reader who is seeking to understand the proponents of abstinence-based sex education. Since I wrote the article, however, some startling developments have occurred.

First of all, I want to thank those physicians who chose to write in response to the December article for their warm support of the article and of abstinence-based sex education. Surprised by the large number of people who are concerned about the need for abstinence-based sex education, Mary Vest and I wrote a resolution for the Medical Student Section of the AMA in support of abstinence-based sex education. Given the strong aversion to abstinence-based sex education which is evident in the media and in the current White House Administration from Jocelyn Elders to Donna Shelela (HHS Director), Mary and I were not optimistic that our resolution would pass. How wrong we were. When our fellow medical students were presented with the documented facts regarding sex-education, they **voted to pass the resolution almost unanimously** (one "no" vote out of approximately 100 medical schools represented). The resolution reads as follows:

*RESOLVED, the AMA will support efforts in the mass media, schools, and communities to make abstinent sexual behavior more socially acceptable and to help students develop the skills and self-confidence they need to restrict their sexual behavior, and the AMA support will include efforts to increase funding and policies at the local, state, and federal levels, though not necessarily at the expense of existing policies; and be it further*

*RESOLVED, the AMA will encourage school districts to adopt sex-ed curricula that have a proven record of reducing teenage sexual activity.*

The Medical Student Section will present the resolution to the AMA-House of Delegates (AMA-HOD) at the annual meeting in Chicago this June. Passage by the AMA-HOD would mean that the resolution is official AMA policy and it would be referred to a committee to determine a course of action. Mary and I would greatly appreciate letters from physicians or other experts who support the resolution, and we believe these letters could prove effective since we plan to forward them to appropriate AMA committees and key members. Letters should refer to the resolution by name "Sexual Restraint Skill Building" and be sent to the following address:

Craig Carmichael
Box 799
Pekin, IL 61555

This issue is so political and the AMA is so afraid of political heat that I fear the resolution will be sent to a committee to die a silent death. This is wrong. Scientific and anecdotal studies have proven repeatedly that abstinence-based sex education is more effective at reducing the STDs and unwanted pregnancies than the condom-only programs championed by the likes of Jocelyn Elders.[1,2] When presenting the resolution to the AMA-Medical Student Section, I was told by one high ranking AMA member that "we have to consider what is best for the AMA." What is best for the AMA is to do what is best for the health of the American people. If the AMA hopes to retain the unrivaled credibility it has enjoyed over the past few decades, it must be willing to stand on scientific evidence, regardless of the political heat.

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1. Carmichael CW. New Sex Education Policy More of the Same. *Missouri Medicine*, December 1993.
2. Lickona T. Where Sex Education Went Wrong. *Educational Leadership*, November 1993.

## St. Louis University

**Paul J. Garvin, MD,** professor of surgery in the division of general surgery, has received a one-year grant from the Missouri Kidney Foundation to study the drugs tetrodotoxin and thromboxane A2 inhibitor.

**Marc D. Malkoff, MD,** assistant professor of neurology, has received a one-year grant from the Sandoz Pharmaceuticals Corporation to study the safety and effectiveness of a nasal spray for migraine treatment.

**David J. Schanzlin, MD,** professor and chairman of the department of ophthalmology, has received a grant from Research to Prevent Blindness to support exploration into the causes, treatment and prevention of blinding diseases.

Researchers in the division of endocrinology are working with two new drugs that may give people with diabetes more control over their blood sugar levels. Both drugs are pills designed for people with Type II diabetes, non-insulin dependent diabetes. Both studies require people over the age of 30 with Type II diabetes. Those interested in participating can call 314/577-8458.

## University of Missouri-Columbia

**Armando Favazza, MD,** professor of psychiatry and neurology, wrote the chapter, "Factitious Disorder by Proxy," for *Revised Cultural Proposals for DSM-IV*, which was edited by the National Institute of Mental Health-sponsored Group on Culture and Diagnosis.

**Susan Krechel, MD,** associate professor of anesthesiology recently was named editor of *Anesthesiology Review.*

**Georgia Nolph, MD,** associate professor of family and community medicine, was re-elected Missouri State Director for the American Medical Women's Association at its annual meeting in November.

**Karl Nolph, MD,** professor and director of nephrology, and **Ramesh Khanna, MD,** professor of nephrology, are co-authors of *The Essentials of Peritoneal Dialysis*, a book that describes all aspects of peritoneal dialysis at a level appropriate for residents and nephrology trainees. Dr. Khanna gave presentations about perionatal dialysis in China, Korea, Japan and Saudi Arabia. Dr. Nolph was made an honorary member of the Italian Society of Nephrology.

**John Oro, MD,** associate professor of neurosurgery, gave a presentation on recent developments in brain tumor management at the First International Symposium on Biomedicine in Lerida, Spain.

**Charles L. Puckett, MD,** professor and director; **Matthew Concannon, MD,** clinical instructor; and **Gregory Croll, MD,** assistant professor, collaborated on a book chapter entitled, "Aesthetic and Functional Problems," for *Plastic Surgery: A Core Curriculum.*

**Steven Tucker,** a fourth-year medical student, has been selected to attend the National Institute of Diabetes, Digestive and Kidney Diseases award ceremony in April for the most outstanding medical students of 1994.

## Washington University

**Richard A. Sutter, MD,** a pioneer of occupational medicine, and his wife, **Elizabeth H. Sutter,** have given $1 million to Washington University School of Medicine to establish an endowed chair to support the study and treatment of work-related injuries and illnesses. The Sutters are 1931 graduates of Washington University's College of Arts and Science.

Dr. Sutter received his medical degree from the School of Medicine in 1931. In 1946 he opened the Sutter Clinic which specialized in treating work-related illnesses and injuries. He sold the clinic to Barnes Hospital in 1984 and it is now Barnes/Sutter Healthcare. Through his efforts with the St. Louis Safety Council Executive Committee, many companies came to realize they could save money by instituting safety programs to protect their workers. Dr. Sutter also was instrumental in getting occupational medicine recognized as a legitimate specialty and persuading employers to pay for their employees' physical exams. Dr. Sutter advised state commissioners of occupational health and was influential in the passage of state laws to protect workers from lead poisoning, the inhalation of hazardous chemicals and other conditions.

Elizabeth Sutter served for many years as secretary-treasurer of the Sutter Clinic and the Sutter Management Co. and was vice president of the Downtown Medical Building. She headed the Committee for the Preservation of Children's Teeth, a group responsible for the passage of an ordinance to fluoridate St. Louis County's water. She is also the first woman to chair the St. Louis County Health and Hospital Board. Mrs. Sutter is considered a pioneer in the advancement of health education. She chaired the auxiliaries of the St. Louis County Medical Society, Missouri State Medical Association and the American Medical Association. In addition she has chaired boards dealing with cancer, mental health, tuberculosis, nursing education and historic preservation. She has received the Lifestyle Award of the American Lung Association and the St. Louis Globe-Democrat Woman of Achievement.

The first incumbent of the Sutter chair in Occupational, Industrial, and Environmental Medicine will be **Bradley Evanoff, MD, MPH**. Dr. Evanoff received his medical degree from Washington University in 1986. He was formerly an instructor in the Occupational and Environmental Medicine Program at the University of Washington. He was promoted to assistant professor of medicine and head of the newly formed Section of Occupational and Industrial Medicine within the Division of General Internal Medicine.

**Lucian V. Del Priore, MD,** assistant professor of Ophthalmology and Visual Science has received a three-year grant from the National Eye Institute for a research project title, "Transplantation of Retinal Pigment Epithelium."

**V. Leroy Young, MD,** professor of surgery, received a grant from the American Society for Aesthetic Plastic Surgery, Inc. for a research project titled, "Outcome of Microbial Contamination of the Saline in Breast Implants."

# NEW MEMBERS

❖ **Charlene Adkins, MD,** Boone Hospital Center, 1600 E. Broadway, Columbia, MO 65201, has become a member of the Boone County Medical Society. Dr. Adkins received her medical degree at the University of Missouri, Columbia in 1988. She completed her residency at Henry Ford Hospital, Detroit, MI. Dr. Adkins specializes in emergency medicine.

❖ **Edward D. Ammala, MD,** 1000 W. 10th, Rolla, MO 65401, has become a member of the Mid-Missouri Medical Society. Dr. Ammala received his medical degree at Creighton University in 1984. He completed his residency at LDS Hospital, Salt Lake City, UT. Dr. Ammala specializes in emergency medicine.

❖ **Roger K. Bost, MD,** Kneibert Clinic, 686 Lester, Poplar Bluff, MO 63901, has become a member of the Butler-Wayne-Ripley-Carter County Medical Society. Dr. Bost received his medical degree at the University of Arkansas, Little Rock. He completed his residency at the University of Missouri, Columbia. Dr. Bost specializes in pediatrics.

❖ **Mark P. Callery, MD,** One Barnes Hospital Plaza #6108, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Callery received his medical degree at The Albany Medical College, Albany, NY, in 1985. He completed his residency at Washington University. Dr. Callery specializes in surgery.

❖ **Jenifer M. Cannon, MD,** 9701 Landmark Pkwy, Suite 207, St. Louis, MO 63127, has become a member of Missouri State Medical Association. Dr. Cannon received her medical degree at St. Louis University in 1988. She completed her residency at St. Johns Mercy Medical Center. Dr. Cannon specializes in obstetrics and gynecology.

❖ **Daniel R. Cardwell, MD,** 1245 N. Butterfield, Bolivar, MO 65613, has become a member of the Dallas-Hickory-Polk-Dade Medical Society. Dr. Cardwell received his medical degree at the University of Arkansas, Little Rock, in 1986. He completed his residency at Sinai Hospital of Detroit, MI. Dr. Cardwell specializes in general surgery.

❖ **Paul R. Chu, MD,** Suite 602, 1515 W. Truman Rd., Independence, MO 64050, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Chu received his medical degree at the University of Wisconsin in 1987. He completed his residency at the University of Kansas. Dr. Chu specializes in cardiology.

❖ **Paul W. Clarke, MD,** Rt. 2, Box 386C, Cape Girardeau, MO 63701, has become a member of the Cape Girardeau County Area Medical Society. Dr. Clarke received his medical degree at the University of Texas Medical Branch Galveston, in 1974. He completed his residency at St. Louis University Hospital. Dr. Clarke specializes in obstetrics and gynecology.

❖ **Eliana D. Delgado, MD,** 10386 Gosport #4, St. Louis, MO 63146, has become a member of the Missouri State Medical Association. Dr. Delgado received her medical degree at the University of California, San Francisco, in 1982. She completed her residency at Moffitt Hospital, University of California. Dr. Delgado specializes in orthopedic surgery.

❖ **Connie S. Drapcho, MD,** 3333 McIntosh Circle, Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Drapcho received her medical degree at Jefferson Medical College, Philadelphia, in 1989. She completed her residency at Temple University. Dr. Drapcho specializes in internal medicine.

❖ **Frank M. Eaton, MD,** 3635 Vista at Grand, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Eaton received his medical degree at the University of Oklahoma in 1986. He completed his residency at St. Louis University. Dr. Eaton specializes in anesthesiology.

❖ **Steven B. Eisenberg, MD,** 222 South Woods Mill Rd. #550, Chesterfield, MO 63017, has become a member of the St. Louis Metropolitan Medical Society. Dr. Eisenberg received his medical degree at the University of Texas, Houston, in 1982. He completed his residency at St. Louis University. Dr. Eisenberg specializes in cardiothoracic surgery.

❖ **Melanie E. Elfrink, MD,** 2303 S. Hwy 65, Marshall, MO 65340, has become a member of the Saline County Medical Society. Dr. Elfrink received her medical degree at the University of Missouri, Columbia, in 1987. She completed her residency at the University of Missouri. Dr. Elfrink specializes in family practice.

❖ **José A. Espaillat, MD,** 1012 N. Main, Sikeston, MO 63801, has become a member of the SEMO Medical Society. Dr. Espaillat received his medical degree at the Universidad Catolica Madre y Maestra, Santiago, Dominican Republic, in 1981. He completed his residency at Ponce Regional Hospital, Puerto Rico. Dr. Espaillat specializes in pediatrics.

❖ **Robert M. Estrel Jr., MD,** 3635 Vista at Grand, St. Louis, MO 63116, has become a member of the Missouri State Medical Association. Dr. Estrel received his medical degree at St. Louis University in 1986. He completed his residency and fellowship at St. Louis University. Dr. Estrel specializes in transplant general surgery.

❖ **Ramiz A. Haroun, MD,** 1100 W 10 St., Rolla, MO 65401, has become a member of the Mid-Missouri Medical Society. Dr. Haroun received his medical degree at the Institute of Medicine and Pharmacy of Cluj-Napoca, Romania, in 1981. He completed his residency at St. Luke's/Roosevelt Hospital, New York, NY. Dr. Haroun specializes in pediatrics.

❖ **Michael D. Hostetler, MD,** Suite 602, 1515 W. Truman Rd., Independence, MO 64050, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hostetler received his medical degree at Indiana University in 1974. He complete his residency at the University of Kansas. Dr. Hostetler specializes in cardiology.

❖ **Jihad Y. Ibrahim, MD,** P.O. Box 648, Salem, MO 65560, has become a member of the Mid-Missouri Medical Society. Dr. Ibrahim received his medical degree at the American University of the Caribbean, Plymouth, Montserrat, in 1987. He completed his residency at Muhlenberg Regional Medical Center, Plainfield, NJ. Dr. Ibrahim specializes in internal medicine.

❖ **Eric J. Johnson, MD,** 1621D Walpole Drive, Chesterfield, MO 63017, has become a member of the St. Louis Metropolitan Medical Society. Dr. Johnson received his medical degree at Indiana University in 1977. He completed his residency at St. Louis University. Dr. Johnson specializes in internal medicine.

❖ **Eve M. Krahn, MD,** 2700 Clay Edwards Dr., Suite 350, Kansas City, MO 64116, has become a member of the Missouri State Medical Association. Dr. Krahn received her medical degree at the University of Missouri, Kansas City, in 1988. She completed her residency at the University of Texas, Southwestern, Dallas. Dr. Krahn specializes in pediatrics.

❖ **Eric M. Kulick, MD,** Suite 210, 8340 Mission Rd., Prairie Village, KS 66206, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Kulick received his medical degree at Suny at Buffalo School of Medicine and Biomedical Science in 1978. He completed his residency at Menninger SCH Psychiatry, Topeka, KS. Dr. Kulick specializes in psychiatry.

❖ **Danielle Landman, MD,** 7426 Chamberlain, University City, MO 63130, has become a member of the Missouri State Medical Association. Dr. Landman received her medical degree at St. Louis University in 1988. She completed her residency at St. Johns Mercy, St. Louis. Dr. Landman specializes in internal medicine.

❖ **James G. Luetkemeyer, MD,** Suite 101, 500 Keene St., Columbia, MO 65201, has become a member of the Boone County Medical Society. Dr. Luetkemeyer received his medical degree at the University of Missouri-Columbia in 1989. He completed his residency at the University of Miami. Dr. Luetkemeyer specializes in ophthalmology.

❖ **Charlotte A. McKoy, MD,** 15 Ridge Creek Rd., St. Louis, MO 63141, has become a member of the Missouri State Medical Association. Dr. McKoy received her medical degree at the University of Alabama in 1971. She completed her residency at the University of Alabama. Dr. McKoy specializes in pediatrics.

❖ **Rae A. McIntee, MD,** Children's Mercy Hospital, 2401 Gillham Rd., Kansas City, MO 64108, has become a member of the Missouri State Medical Association. Dr. McIntee received her medical degree at Creighton University in 1985. She completed her residency at the University of Kansas. Dr. McIntee specializes in otorhinolaryngology.

❖ **Jon C. Parks, MD,** 712 Lester, Poplar Bluff, MO 63901, has become a member of the Butler-Wayne-Ripley-Carter County Medical Society. Dr. Parks received his medical degree at the University of Kansas in 1989. He completed his residency at the Wichita Center for Graduate Medical University of Kansas. Dr. Parks specializes in anesthesiology.

❖ **Elizabeth F. Pribor, MD,** 4940 Children's Place, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Pribor received her medical degree at St. Louis University in 1985. She completed her residency at Washington University. Dr. Pribor specializes in psychiatry.

❖ **Luz S. Racela, MD,** #120, 11237 Nall, Leawood, KS 66211, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Racela received her medical degree at the College of Medicine University of the Philippines, Manila, in 1963. She completed her residency at the University of Kansas. Dr. Racela specializes in pathology.

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Continued from page 149

❖ **James C. Redington, MD,** 2700 Clay Edwards Dr., Suite 240, N. Kansas City, MO 64116, has become a member of the Clay-Platte County Medical Society. Dr. Redington received his degree at St. Louis University in 1986. He completed his internship at the University of Iowa and fellowship at St. Louis University. Dr. Redington specializes in nephrology.

❖ **Loren C. Schrenk, MD,** 12818 Tesson Ferry Rd., Suite 201, St. Louis, MO 63128, has become a member of the Missouri State Medical Association. Dr. Schrenk received his medical degree at the University of Arizona in 1975. He completed his residency at Henry Ford Hospital, Detroit, MI. Dr. Schrenk specializes in ophthalmology.

❖ **Robert D. Seelig, MD,** 9 Hacienda, St. Louis, MO 63124, has become a member of the Missouri State Medical Association. Dr. Seelig received his medical degree at St. Louis University in 1985. He completed his residency at the University Health Center, Pittsburg, PA. Dr. Seelig specializes in diagnostic radiology.

❖ **Peter T. Selove, MD,** Freeman Hospital, 1102 W. 32nd St., Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Selove received his medical degree at West Virginia Medical Center in 1972. He completed his residency at West Virginia Medical Center. Dr. Selove specializes in emergency medicine.

❖ **Mahendra S. Shah, MD,** 1115 Alaska St., Suite 112, West Plains, MO 65775, has become a member of the South Central Counties Medical Society. Dr. Shah received his medical degree at the Medical College, Baroda University, Baroda, Gujarat, India. Dr. Shah completed his residency at The Medical Center of Delaware, Wilmington. Dr. Shah specializes in urological surgery.

❖ **Carolyn P. Small, MD,** 206 Northland Prof. Bldg., Suite 206, St. Louis, MO 63136, has become a member of the Missouri State Medical Association. Dr. Small received her medical degree at St. Louis University in 1980. She completed her residency at St. Louis University. Dr. Small specializes in internal medicine.

❖ **Brian D. Smith, MD,** 1564 Clayton Woods Ct., Ballwin, MO 63011, has become a member of the Missouri State Medical Association. Dr. Smith received his medical degree at the University of Missouri, Columbia in 1986. He completed his residency at St. Louis University Hospital. Dr. Smith specializes in anesthesiology.

❖ **Gregory H. Smith, DO,** 17504 Summit View Place, Glencoe, MO 63038, has become a member of the Missouri State Medical Association. Dr. Smith received his doctor of osteopathy at the University of Health Sciences, College of Osteopathic Medicine, Kansas City, in 1983. Dr. Smith specializes in anesthesiology.

❖ **Deborah Wienski, MD,** 3015 N. Ballas Rd., St. Louis, MO 63131, has become a member of the Missouri State Medical Association. Dr. Wienski received her medical degree at Tufts University in 1983. She completed her residency at Strong Memorial Hospital, Rochester, NY, and fellowship at Boston City Hospital. Dr. Wienski specializes in hematology.

❖ **William T. Wilson, MD,** Suite 404, 1515 W. Truman Rd., Independence, MO 64050, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Wilson received his medical degree at the University of Kansas in 1985. He completed his residency at Parkland Memorial Hospital, Dallas, TX.

## RESIDENTS

Lisa M. Adler, MD - *Obstetrics & Gynecology*
Christine M. Boutwell, MD - *Internal Medicine*
Shaheen N. Chowdhry, MD - *Internal Medicine*
Kimberly A. Cochran, MD - *Internal Medicine*
Patricia A. Cone, MD - *Internal Medicine*
Lloyd A. Darlow, MD - *Family Practice*
Timothy H. Elliott, MD - *Internal Medicine*
Ramilo I. Gatapia, MD - *Internal Medicine*
Marcel Haulard, MD - *Family Practice*
Dennis R. Holmes, MD - *General Surgery*
Sarah J. Hon, DO - *Internal Medicine*
Suzanne Johnston, DO - *Internal Medicine*
Louise M. Kaine, DO - *Internal Medicine*
Diana M. Lind, DO - *Internal Medicine*
Frederick N. Lobati, MD - *Internal Medicine*
Gregory E. Martin, MD - *Internal Medicine*
Sean T. McLaughlin, MD - *Internal Medicine*
Margaret A. Murphy, MD - *Internal Medicine*
Srinivas Mutyala, MD - *Internal Medicine*
Venu S. Nair, MD - *Internal Medicine*
Timothy C. Pasowicz, DO - *Internal Medicine*
Bruce H. Reifenrath, MD - *Internal Medicine*
Robin L. Rinehart, MD - *Internal Medicine*
Kristie A. Rutledge, MD - *Internal Medicine*
Damien R. Stevens, MD - *Internal Medicine*
Brian M. Terry, MD - *Orthopedic Surgery*
Robert Tolan, MD - *Pediatric Infectious Diseases*
Jean P. Waddle, MD - *Anesthesiology*
Carolyn M. Waldo, MD - *Internal Medicine*

## STUDENTS

*Washington University*
Dawn O. Kleindorfer
Charles K. Lee
Robert Puchalski

# CME CALENDAR

**The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send CME information for listing in *MISSOURI MEDICINE*. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.**

## March

**4** - *Denver, CO:* **Frontiers in Ovulation Induction.** Contact Washington University, 314/362-6893, 800/325-9862 interstate.
**4 & 5** - *St. Louis:* **The Annual Meeting of the Midwest Gut Club.** Contact St. Louis University, 314/577-8167, 800/553-2712.
**4 to 6** - *Columbia*: **17th Annual Family Practice Update.** 13.4 credit hours. Contact Laurie Seigel, MU, 314/882-4105.
**6 to 11** - *Vail, CO:* **Update in Clinical Medicine.** 19 credit hours. Contact Steven Smith, GW University, 202/994-4285.
**7 to May 23 (Monday evenings)** - *St. Louis:* **Internal Medicine Review.** Washington University 314/362-6893, 800/325-9862 interstate.
**9** - *St. Louis:* **Updates in Gastroenterology.** 4 credit hours. Contact St. John's Mercy Medical Center, 314/569-6290.
**10 & 11** - *St. Louis:* **Gastrointestinal Surgery: Refresher Course and Update.** Contact Washington University, 314/362-6893 in MO or 800/325-9862 interstate.
**11** - *Kansas City:* **What's New in Diabetes.** 5 credit hrs. The Ed Bixby Institute, 816/276-4306, 800/892-5771 ext. 4306, 800/821-5140 ext. 4306 - interstate.
**14** - *St. Louis*: **City-Wide Radiology Conference: Theresa McLoud, MD - Computed Tomography of the Pulmonary Parenchyma.** Mallinckrodt Institute of Radiology, 314/362-7130.
**15** - *Kansas City*: **Perinatal Core Curriculum Workshop #5.** 5 credit hours. Contact Carol Osborne, St. Luke's Hospital of K.C., 816/932-3737, fax - 816/932-5119.
**17 to 19** - *St. Louis:* **Microsurgery of the Temporomandibular Joints.** 20 credit hours. Contact St. Louis University, 314/577-8167 or 800/553-2712.
**17 to 19** - *St. Louis*: **The Fifth International Vaginal Surgery Conference.** Contact Patricia Kovac, 314/991-0441.
**18** - *St. Louis:* **Building Physician & Patient Partnerships in Understanding & Caring for Asthma.** Contact Washington University 314/362-6893, 800/325-9862 interstate.
**18** - *St. Louis:* **Laboratory Monitoring of Anticoagulant Therapy: Advances and Controversies.** 5 credit hrs. St. Louis University, 314/577-8167 or 800/553-2712.
**18** - *St. Louis*: **The National Health Care Reform.** 6 credit hrs. Mary Ann Jauer, St. Louis University, 314/658-3067.
**18 & 19** - *St. Louis:* **Laparoscopy Ultrasound.** Contact Washington University 314/362-6893, 800/325-9862 interstate.
**18** - *Washington D.C.:* **Ultrasound in Abdominal Surgery.** Contact Maria Gorrick, GW University, 202/994-4285.
**24** - *St. Louis:* **Neonatal Pharmacology.** 6.75 credit hrs. Contact Patricia Nash, St. Louis University, 314/577-5631.
**24 & 25** - *St. Louis:* **Advanced Applications in Endoscopic Neurosurgery.** 14 credit hours. Contact St. Louis University, 314/577-8167, or 800/553-2712.
**25 & 26** - *Springfield:* **Pediatric Advanced Life Support Provider Course.** 16 credit hours. Call 417/885-4117.
**26 & 27** - *Springfield*: **Advanced Cardiac Life Support Provider Course.** 15.5 credit hours. Call 417/885-2806.
**26** - *St. Louis:* **Molecular & Medical Genetics in Clinical Practice.** Washington University 314/362-6893, 800/325-9862 interstate.
**30** - *St. Louis:* **Updates in Ophthalmology for the Non-Ophthalmologist.** 4 credit hrs. St. John's Mercy Medical Center, 314/569-6290.

## April

**7 to 10** - *Kansas City*: **The 136th Annual Convention of the Missouri State Medical Association.** A wide variety of scientific sessions. Contact MSMA, 314/636-5151.
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1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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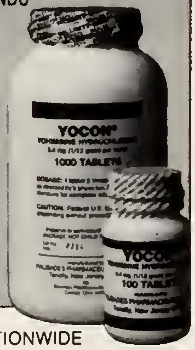

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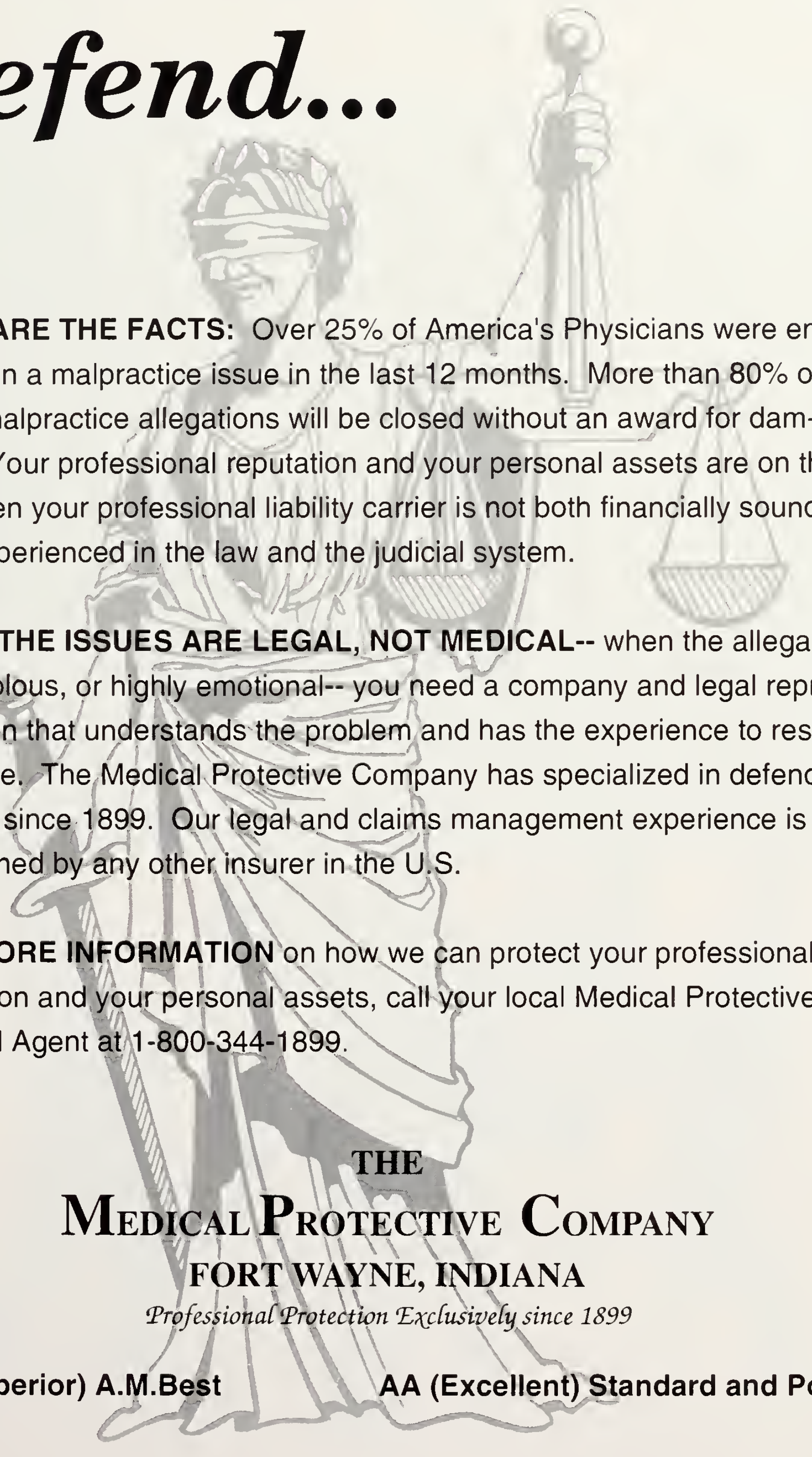

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Printed by the Ovid Bell Press, Inc., 1201-05 Bluff Street, Fulton, Missouri 65251.

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Clarence A. Martin, MD, *Joplin*
Thomas R. Stubbs, MD, *West Plains*
Mark C. Kasten, MD, *Cape Girardeau*
Luis Anglo, MD, HMSS, *St. Louis*
Robert Swanson, MD, RPS, *Ballwin*
Samuel Hughes, Student, *Columbia*

## AMA Delegates

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Walter A. German, MD, *Springfield*
Robert T. Gibbons, Jr., MD, *Overland Park, KS*
William H. Huffaker, MD, *Chesterfield*
Melvin C. Kasten, MD, *Cape Girardeau*
Robert R. MacDonald, Jr., MD, *St. Louis*
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Jack Kayes, MD, *St. Louis*
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# The Children: Still at Risk

J. Regan Thomas, MD, Editor

In the June issue last year, I wrote in this column about the increasing death rate of children in Missouri from abuse or neglect. I suggested at that time that unfortunately there were states with even worse records than Missouri. It represented then, and still now, a "shameful national crisis."

**Missouri had the 16th highest child abuse death rate among the states. They also ranked the nation's 39 metropolitan areas with populations greater than one million. St. Louis was 10th and Kansas City came in 12th. Too close to the top of the list for comfort.**

Recently a new study has reinforced these concerns. The report, co-authored by MU researcher Bernard Ewigman, MD, and researchers from the U.S. Centers for Disease Control and Prevention, established a national child abuse death rate per 100,000 population. Missouri had the 16th highest child abuse death rate among the states. They also ranked the nation's 39 metropolitan areas with populations greater than one million. The highest death rate was found in Phoenix, while ranking lowest was Boston. St. Louis was 10th and Kansas City came in 12th. Too close to the top of the list of comfort.

*The New York Times* reported that previous investigations indicated the childhood deaths from neglect and abuse were frequently under-reported. Many children's deaths officially attributed to accidents, disease, fires, and other causes may actually be from maltreatment. Dr. Ewigman's results which were published in *The Archives of Pediatric and Adolescent Medicine* support that premise. He calculates that between 2.5 percent and 25 percent of deaths reported as strangulation or suffocation and between 1.3 percent and 40 percent of Sudden Infant Death Syndrome deaths were actually related to abuse or neglect. It represent an uncomfortable thought and begs for active intervention with preventative measures.

As I reported last summer, Missouri has established multiagency teams in each county throughout the state to look into this problem. These groups review every death in children under age 14 occurring in suspicious circumstances. Missouri's comprehensive program apparently is a model which the CDC and other states are utilizing to begin to address the problem.

These efforts are all "after the fact." Kids and families are still suffering unnecessarily. Now that these statistics are documented, steps should be taken to react to the data in a proactive fashion. Perhaps by examining the factors that cause rates to be higher in some parts of the country or state, steps can be identified which will help prevent these tragic deaths. A model that identifies causes can begin to suggest real and meaningful application of the numbers. Common themes seem to recur here. Substance abuse, unemployment and poverty, poor parental education and skills are frequently on the list as related situations possibly leading to child abuse. We can't allow the world to be contented having identified the data. It should be a catalyst to identify some solutions. ■

# Legislation is messy, but we need to be there . . .

Melvin C. Kasten, MD, MSMA President

MSMA's annual meeting is one of the few chances that you and I have to gather and discuss the condition of our profession each year. While we meet, however, we should recall that our group is not the only body that is formulating plans about how medicine should be practiced in Missouri.

> **It is necessary that you and I, the rank and file physicians, play an active part in our home districts. We must speak out as never before. If we are silent now, we may never be asked to speak again on such an important piece of legislation.**

The Missouri General Assembly, for example, is considering some health care experiments that could have drastic consequences for physicians and patients alike.

The Governor's Health Care Reform Bill, HB 1622, is a case in point. This bill is a sweeping health care reform proposal which, in its present form, would dramatically and forever change the way you practice medicine. It was conceived by Governor Mel Carnahan and his advisors and is sponsored by House Speaker Bob Griffin. You should have received your brief summary of the 156-page proposal that was sent to all Missouri State Medical Association members.

Our alarm bell has galvanized the medical community into action. The St. Louis Metropolitan Medical Society held a special meeting on March 10th and filled the hall, one of the largest turnouts they've had in the past decade. Physicians across the state are rallying in opposition of this proposal, and for good reason, too.

HB 1622, as introduced, is bad medicine, pure and simple. It would turn our health care delivery system into a state-controlled, hospital and insurance company-owned network. You'd be forced to belong to that network and it would dictate how you practice, what you practice, and on whom you practice.

But, regardless of this bill's provisions, as unacceptable as they may be at the moment, you should be equally concerned about the process involved in changing such a proposal. This proposal was dreamed up by a small clique of academic highbrows, government bureaucrats, and social engineers who have had little or no experience in the real world of health care. But, they have you and me at a disadvantage right now because they have a prominent place at the table where these issues are being decided, and we're on the outside looking in. We must correct that.

Our lobbying staff is working feverishly in the Capitol to effect significant changes in the proposal, and there will be notable changes. But, rather than rely exclusively on our staff in Jefferson City, it is necessary that you and I, the rank and file physicians, play an active part in our home districts. We must speak out as never before. If we are silent now, we may never be asked to speak again on such an important piece of legislation.

It is imperative that each of us make an effort to communicate with our state representatives and senators about HB 1622. It is not so important that you voice an opinion, but that you let them know that you have an opinion, that you have ideas, that you are willing to participate, and that physician participation is vital to the debate on health care reform.

Our first hand knowledge can help our elected officials grasp the real-life ramifications of legislation like HB 1622. With time and a little perseverance, the political decision makers will come to rely on your advice not only on this issue but on every health care question. Reach out to your representatives, do it today! ■

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# The Inevitability of Change

Betty Huffaker, MSMAA President

When I took office last year, President Clinton was beginning his presidential term and his theme: "this is a season of change" rang in our ears. His number one priority was to be health care reform and immediately appointed his wife, Hillary Rodham Clinton, to head the task force for this monumental task. Like any responsible spouse, she took this charge extremely seriously and with her staff developed one of the most sweeping health reform package imaginable.

Needless to say, fear and uncertainty for the future of medicine, was a major problem to be faced by the medical community.

I chose as my motto for the year, *Carpe Diem* (Seize the Day). The Missouri State Medical Association Auxiliary has certainly cooperated by moving forward with activity and advocacy. In cooperation with the American Medical Association Auxiliary's change of their name to Alliance, we also changed our name to the Missouri State Medical Association Alliance. It was felt this move would better reflect the changing attitude of the organization to work more closely in alliance with other organizations in the community and to move away from the erroneous image that this is a female only organization.

We also changed the name and format of our newsletter and began focusing on the education of our membership as to the issues facing the medical community. Believing that knowledge is power we attempted to be a conduit for keeping our members aware of legislative issues as they arose and stressed the importance of Alliance member involvement in the legislative arena. Our goal was to follow education with action. Members faced this challenge by sponsoring voter registrations, volunteering as campaign workers for candidates of their choice, and having phone alerts. Jasper County is to be commended for their successful "mini-internship" program whereby they educated their legislators and business leaders to the problems facing physicians in their community. Many Alliance members joined with their local Medical Society and went to Jefferson City to meet with the Legislators. The MSMA Alliance sponsored an extremely successful and informative "Day at the Legislature," with a coffee for the legislators at which one could talk freely and informally with their legislators. Keeping the membership aware of the onerous legislation pending before the legislature has been a priority this year. Realizing that our legislators are the keys to any health system reform, the membership has been communicating with their elected officials by phone, letter, and most importantly by their visitations, and not just once, but repeatedly. Being an active partner to our physician spouses has continued to be a priority for the Alliance.

The life blood of any organization is its membership. We worked hard reaching out to spouses and inviting them to be a part of our organization. We encouraged physicians to give their spouses a gift membership in the Alliance so that they may have the opportunity to further self growth and to become an active participant in helping to mold the changes inevitable in the manner medicine will be practiced in the future. Benefits of membership were sent to prospective new members in the organized counties. The one-on-one recruitment approach was utilized whereby the membership team sent personal letters and made phone calls inviting individuals to join or renew their membership. Cole County had a social for new members; Cape Girardeau sent a "basket of information" to their new members and offered babysitting at their meetings; St. Louis County and Greene County both worked hard at attracting the medical student/ resident physician spouse to membership in the Alliance. Across the state the membership chairmen have been diligent in their efforts to recruit and retain members and to bring a message of hope and unity in these troubling times. (If your spouse is not a member of the MSMA Alliance and would like to join, please let me know.)

The Missouri State Medical Association Alliance: *physicians' spouses dedicated to the health of Missouri.* Our new name and tagline describe our

Continued on page 168

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# MONETAMED PROFILE

## THOMAS P. DOYLE, M.D.

**HOME:** St. Louis, Missouri

**AGE:** 36.

**SPECIALTY:** Orthopedic Surgery.

**MEDICAL COLLEGE:** University of Missouri, 1978

**PRACTICE:** "I recently purchased an established but declining sole practitioner office from a retiring physician. It's a risk, but they say that great deeds are usually wrought at great risk."

**HOBBIES:** Horseback riding and golf. "If I combined activities, would it be polo?"

**LAST BOOK READ:** Missouri: Images of Nature, photographed by Charles Gurche.

**LATEST ACCOMPLISHMENT:** "Testing a protective knee pad I'm developing for use by football players."

**PROFILE:** Independent and open-minded. "Living in the country, I don't feel hampered by social convention. I can work on new ways of doing things."

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Thomas P. Doyle, M.D. is a composite of numerous MonetaMed physician clients.

Continued from page 166

partnership in medicine with our spouses very succinctly. We care about the state of health in Missouri and our health programs this past year reflect this attitude. As I traveled to the various counties in Missouri I was amazed at the scope and diversity of the many health projects. We once again joined with the AMA Alliance in their Campaign Against Family Violence and in addressing the needs of Adolescent Health, in addition to working in our communities in areas of great local need as identified by our cities or counties. The Alliance continued to work in a coalition with the Missouri chapter, Committee for Prevention of Child Abuse, to educate child care givers about the Shaken Baby Syndrome. Movies and workshops were presented with over 5,000 Shaken Baby brochures being distributed. (Butler-Wayne-Ripley-Carter used them in their pre-natal classes and their Women's Health Care Clinic.) Alliance members raised funds for and worked in shelters for battered women and children. In Greene County the proceeds of a fund-raiser went in support of a homeless shelter for AIDS patients. Jasper updated their Teen Yellow Pages, which is a compilation of addresses and telephone numbers especially geared to help the youth in their community to find help in times of crisis or need. Other communities sponsored a Healthy Teens Poster Contest (Cole), a free health clinic, health fairs and symposia, distribution of 200 "Shape Up for Life" coloring books, 400 Child Abuse and Neglect brochures, and sponsored the Life Education Mobile van (St. Louis), which is equipped to teach children about their bodies and the harmful effect substance abuse can have on their bodies. Alliance members helped with the Meals-on-Wheels program and volunteered in nursing homes. Funds were raised to provide toys for needy children at the Holiday Season (Tri-County) as well as to provide nursing scholarships. If a need is identified in a community you will usually find an Alliance member nearby in an advocacy role.

We recognize the need for support of the American Medical Association-Education and Research Foundation (AMA-ERF). Across the state counties utilized the Holiday Sharing Card to raise money for medical student loans, scholarships, and for medical research at the medical school of their choice. Metro Med of Kansas City had a "taste treat" luncheon and sale; Cape Girardeau had a raffle sale; Buchanan sported a silent auction; and Saline a "White Elephant" sale helped raise funds. At the MSMA Alliance's 69th State Convention in Kansas City the proceeds of the "In the Spotlight" dinner/show and the basket silent auction will go to support AMA-ERF.

As I reflect on this past year I see that the MSMA Alliance is a dynamic, challenging organization composed of caring physician spouses committed to the well-being of their communities. We believe in our unique partnership in medicine with our spouses. We believe that by working together we are a strong force that can make a difference in our communities, state, and country. **We have the knowledge, the experience, the caring quality, and the creativity to make a difference.** As I traveled the state and attended county meetings I found spouses apprehensive about the future of medicine and the changes to be enacted. In spite of this, they are willing and eager to be involved in this process. They are proud of who they are and what the family of medicine stands for.

I see the Alliance membership standing strong in their beliefs that our spouses are involved in providing the best health care in the world - it is the "system" of delivery and compensation that needs reforming. We must never forget to *seize each day* as it comes and to use it in a proactive, productive manner. We know that change is coming. In the words of John F. Kennedy, "Change is the law of life. And those who only look to the past or the present are certain to miss the future." I believe we all have the courage to take the actions necessary to be involved in the shaping of our future.

I thank each and everyone of you for your support throughout this past year. (CARPE DIEM!) ■

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# Ophthalmology Quiz #4

John C. Hagan III, MD

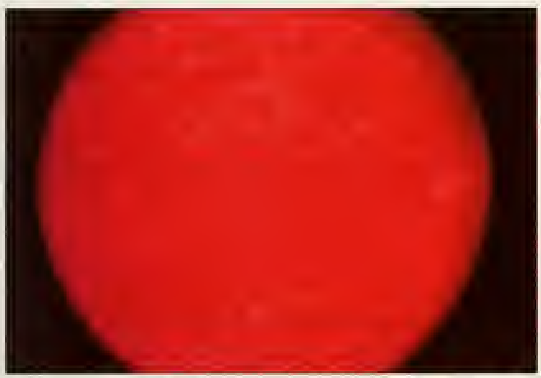

Figure 1a - Right Eye

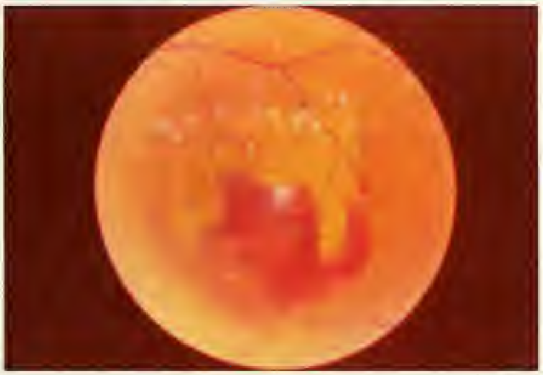

Figure 1b - Left Eye

**Patient 1**

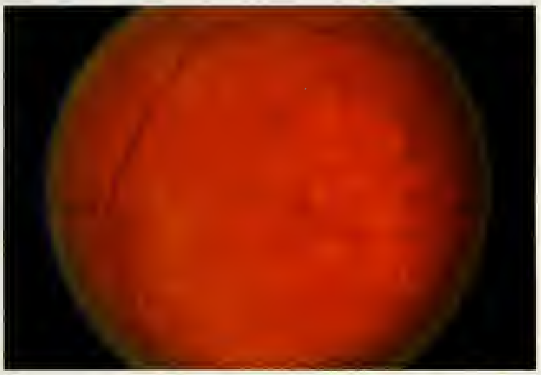

Figure 2a - Right Eye

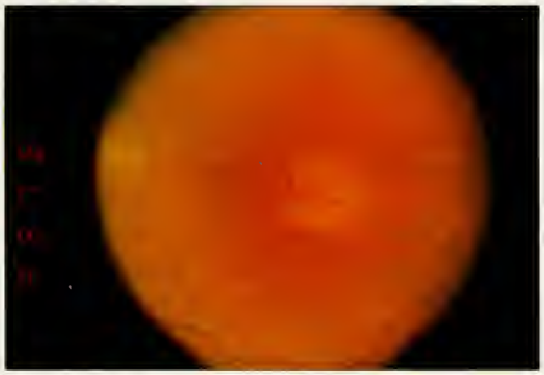

Figure 2b - Left Eye

**Patient 2**

These are the retinal photographs of two elderly white male patients who presented to their family physicians. Patient 1 complains of sudden loss of vision in his left eye. Patient 2 complains of long standing progressive loss of central vision in both eyes.

**1. The best diagnosis for patient 1 is:**
- **a. Ocular histoplasmosis syndrome with macular hemorrhage**
- **b. Age related macular degeneration with drusen and neovascularization.**
- **c. Age related macular degeneration without neovascularization**
- **d. Central retinal artery occlusion**

**2. The best diagnosis for patient 2 is:**
- **a. Retinitis pigmentosa**
- **b. Age related macular degeneration with neovascularization**
- **c. Age related macular degeneration without neovascularization**
- **d. Chloroquine retinopathy**

**(See answers on next page.)**

# OPHTHALMOLOGY QUIZ ANSWER

**(Ophthalmology Questions are on previous page.)**

ANSWERS:

1. **b. Age related macular degeneration with drusen and neovascularization.**
2. **c. Age related macular degeneration without neovascularization.**

In the United States age related macular degeneration (ARMD) is the leading cause of legal blindness in patients older than 55. The prevalence increases with age. It is estimated that by 1995 approximately 750,000 people over 65 will be legally blind in one or both eyes due to ARMD. It is important for non-Ophthalmic physicians to identify patients with ARMD when doing direct Ophthalmoscopy.

The macula is an oval area two disc diameters temporal to the optic disc. It contains only cones and is responsible for fine central, color and reading vision. In the healthy state, especially in the young, it produces a brilliant light reflex (i.e. foveal reflex). Macular changes due to age include loss of foveal reflex, drusen, degenerative changes of the retinal pigmented epithelium (hypo & hyperpigmentation, pigmentary clumping) and choroidal neovascularization. Drusen are yellowish nodules (colloid bodies) that may occur in the peripheral retina or in the macula. There are two types of drusen: hard and soft. Hard drusen are small, round and discrete. This type is present in young individuals and does not carry an increase risk of ARMD Soft drusen (Fig. 1a) are large, confluent, increase with age and carry an increased risk of choroidal neovascularization (Fig. 1b).

There are two forms of ARMD: non-exudative or "dry type" and exudative or "wet type." Non-exudative ARMD is the more common form (80-90% of the cases). In severe cases this form is associated with geographic atrophy (Fig. 2a, 2b) milder forms have loss of foveal reflex, hard drusen and minor pigmentary changes. Exudative ARMD (Fig. 1b) is associated with choroidal neovascularization and macular hemorrhage, edema and eventually scarring and fibrosis. Although exudative ARMD occurs in only 10-20% of the cases it has a poorer prognosis, more rapid progression and causes 90% of ARMD induced legal blindness. Non-exudative ARMD may suddenly convert to exudative ARMD. This event is often associated with sudden reduction and distortion of central vision (Case 1).

Some forms of exudative ARMD may be treatable with laser photocoagulation although reoccurrence of neovascularization is common and the treatment involves significant risks. The treatment has a better prognosis if done within 72 hours of the development of neovascularization. Patients at risk for ARMD should have regular examinations by an Ophthalmologist, screen their vision daily with an Amsler grid and consider taking "ocular" vitamins. These contain vitamins A, C, E and zinc and selenium. The eye should also be protected from ultra-violet (UV) rays by UV-absorbing coating on regular spectacles and sunglasses.

*References*

1. *Basic Ophthalmology for Medical Students and Primary Care Residents, 6th Edition.* Frank G. Berson, MD Editor, American Academy of Ophthalmology, San Francisco, 1993.
2. *Macular Degeneration: Preferred Practice Pattern.* American Academy of Ophthalmology, San Francisco, 1993.

**The Ophthalmology Quiz is produced and coordinated by John C. Hagan III, MD, Director, Midwest Eye Institute of Kansas City, Inc., North Kansas City, Missouri. Financial support for this feature is provided by ALCON SURGICAL, North Kansas City Hospital, Missouri Ophthalmological Society, Inc., CHIRON, Inc., MERCK & CO. Inc., O. H. Gerry Optical Co. and IOPTEX , Inc.**

# The Financial Impact of Managed Care on the Physician's Practice

Larry L. Harris, CPA

**Managed Care** is certainly not a new concept nor is it unfamiliar to many parts of the country. Physicians in St. Louis, Kansas City, and a few isolated areas of Missouri are all too familiar with the challenges and headaches of practicing medicine in the managed care environment. But for most physicians in the "outstate" cities and towns of Missouri, managed care is just now becoming a nuisance to their practice. The financial impact of this "nuisance" could have a significant impact on practice earnings if the physician or the physician's group is not prepared for the challenge.

The long-term challenge for the physician in the managed care environment is the maintenance of a sufficient patient base to sustain a viable practice. The word "maintenance" is somewhat misleading in that practice revenues will actually decline unless the patient base expands. Managed care really means managed cost which equates to lower fees. To sustain a practice on lower fees, the physician of the future will need to be more efficient, more cost conscious, and more risk oriented.

While the subjects of efficiency, cost, and risk need to have a high priority in practice planning, the subject of lower fees is often the first barrier to overcome. Overcoming this barrier is often a matter of realizing that lower fees are better than the alternative: *no fees at all.* Many physicians, especially in rural areas, have been accepting negotiated fees for years in the form of Medicare and Medicaid assignment. Eventually, the physician who chooses not to accept these negotiated (lower) fees will lose even long-term, well established patients to other physicians within the patient's managed care network.

Accepting lower fees, however, does not mean simply giving in to every pricing proposal and contract that comes along. There are several steps the physician practice should take to prepare for contract negotiations:

1. Know your practice revenues. What are the top twenty (20) CPT codes used in the practice, and what are the direct (and indirect if possible) costs of these procedures. This will help establish a base-line for evaluating contract proposal fee schedules. Fees are negotiable - don't settle for unrealistically low fee schedules.

2. Know your practice operating margins. What percent of your average charge per patient is profit. This will establish a floor or lower limit below which discounts will create losses, not just lower profits. Managed care entitles seem to be stuck on intervals of 5%. Understanding your margin can aid in negotiating discounts at an acceptable level, something other than just 5% or 10%.

3. Know your competition. Find out what your colleagues in established managed care areas are doing. Be prepared to respond when the contractor says "that's what we're doing in St. Louis or Kansas City". Remind the contractor you are not in St. Louis or Kansas City. You don't need to accept the same deep discounts as the "cities" because the environment has not reached full managed care maturity in your area (yet!). Withholds on prepaid plans are also negotiable in immature markets.

4. Know the contract requirements. Make sure you thoroughly understand the obligations of the contract. Seek accounting or legal advice if in doubt a slight misunderstanding can cause revenue penalties including *zero* reimbursement for an entire visit or treatment episode. Most contracts contain precertification requirements that are much more stringent than current indemnity health plans.

5. Know your patient base. If you choose to get involved in prepaid or HMO type arrangements where fees are capitated, a knowledge of the patient base involved in the contract can be critical. Although the capitated fee is based on demographics of the enrolled patients, the negotiation of a few more cents per participant per month can make or break the profitability of the plan to your practice.

Meeting the challenge of lower revenues brings on the headaches of managing these contracts. Efficiency and cost containment will be necessary to sustain earnings while revenues decline. Unfortunately, managed care has the effect of creating additional paperwork for both the physician and the office staff. Consequently, practice overhead will increase significantly unless the practice is prepared to manage the contracts.

The major challenge in managing contracts is one of information management. Both the physician and the office staff must have instant access to concise, contract specific information. The physician will need access to:

1. A general outline of each plan;
2. A listing or summary of procedures, treatments, or diagnostic tests that will require precertification;
3. A list of other physicians and providers in each plan's network to whom referrals or admissions may be required;

Continued on page 175

# Unsafe Driving Behaviors and Hospitalization

Mark Van Tuinen, PhD

**The medical costs associated with motor vehicle crashes are difficult to measure. Most attempts have used crash data and cost data that are only indirectly related to each other[1,2] or have followed patients in a few hospitals or trauma centers.[3-5] These studies produce localized estimates or rough national estimates of limited use to policy makers. The result has been a dependence on more readily available mortality data, such as the Fatal Accident Reporting System, to guide automotive safety efforts.**

**The limitations of mortality data and the increasing sophistication of medical care data bases have resulted in a strong interest in obtaining crash-linked morbidity data. Hence, in 1993, the National Highway Traffic Safety Administration (NHTSA) awarded the Missouri Department of Health and six other applicants grants to link automotive crash records to statewide ambulance trip, outpatient care, hospitalization and mortality records. By identifying an individual across multiple data sets, states would be able to determine directly the relationship of driver behaviors and crash characteristics to hospitalization rates and other medical outcomes. Examination of hospital pay source information would expose the toll of automotive crashes on public tax dollars.**

**Having recently completed the record linkage phase of this project, Missouri Department of Health staff are beginning to analyze the impact of automotive crashes on health care costs in Missouri. In this report, three unsafe driving behaviors, failure to use a safety device (seatbelts and motorcycle helmets), driving under the influence of alcohol, and speeding, are related to the risk of hospitalization or death, hospital costs, and expected pay source.**

## METHODS

To develop a data base that would relate automotive crash information to medical outcomes, the Missouri Department of Health linked eight statewide databases for the 1990 data year. These were the automotive crash file maintained by the Missouri State Highway Patrol, the Emergency Medical Services ambulance trip ticket file, the Head and Spinal Injury Registry, the Trauma Registry, and the Missouri Death Certificate (mortality) file, all maintained by the Department of Health, and the outpatient care and hospital discharge files, maintained by the Hospital Industry Data Institute, a data collection agency for the Missouri Hospital Association. All files were carefully edited to remove duplicate records and standardize codes for common variables.

As only the crash and Head and Spinal/Trauma Registry files contained the individual's name in 1990, records representing the same person were linked using a special computer program[6] provided by the NHTSA. This program links records probabilistically by comparing such variables as birth date, injury date, race, sex, county of incident, county of residence and names, where available. Though the accuracy of this method has yet to be completely assessed, the results are very similar to a file of 1988 data that were linked through computer programs written by Department of Health staff. Thorough examination of those data indicate that, depending on the file, 65% to 80% of the health care file records were linked to a crash record. The mismatch rate, or rate of false positives, varied from 1% to 3%.

All comparisons reported below were tested statistically by chi-square for frequencies or t-tests for means. Those reported as significant were significant at the .05 level or greater.

## RESULTS

The effects of unsafe driving behaviors will depend on the particular mix of other variables present during a motor vehicle crash. To reduce the impact of these extraneous factors, just the results for automobiles, vans, pickup trucks and motorcycles are presented here. Large trucks, buses, farm machinery, and ATV's have been excluded. The analyses are further restricted to drivers, and just those drivers involved in trafficway crashes involving either injury or property damage of $500 or more.

Table 1 shows that of 241,611 drivers of automobiles, vans or pickup trucks involved in crashes, 22% were reported not to be using seat belts. Seventeen percent of the drivers were involved in a crash where at least one of the drivers was cited for speeding or driving too fast for existing conditions, and the investigating officer judged that this was a factor contributing to the crash. Six percent of the drivers were cited for alcohol intoxication as a factor contributing to the crash.

**TABLE 1**
**Number and Percent of Unsafe Drivers by Vehicle and Type of Behavior**

**SAFETY BELT/HELMET**

| Vehicle | Total Drivers | Not used | % | Used | % | Unknown | % |
|---|---|---|---|---|---|---|---|
| Automobiles and Pickup Trucks | 241,611 | 46,773 | **22** | 169,265 | **78** | 25,573 | **11** |
| Motorcycles | 1,639 | 81 | **6** | 1,204 | **94** | 354 | **22** |

**SPEEDING**

| | Yes | % | No | % | Unknown | % |
|---|---|---|---|---|---|---|
| Automobiles and Pickup Trucks | 39,579 | **17** | 190,681 | **83** | 11,351 | **5** |
| Motorcycles | 426 | **27** | 1,158 | **73** | 53 | **3** |

**ALCOHOL DETECTED**

| | Yes | % | No | % | Unknown | % |
|---|---|---|---|---|---|---|
| Automobiles and Pickup Trucks | 13,225 | **6** | 216,485 | **94** | 11,901 | **5** |
| Motorcycles | 189 | **12** | 1,394 | **88** | 56 | **3** |

NOTE: Percentages for unknowns are based on the total drivers; percentages for the used/not used and yes/no categories are based on the total drivers minus the unknowns.

All of these behaviors are likely to be underreported. Seat belt use may be self-reported or observed by the investigating officer. Every instance of speeding prior to a crash is unlikely to be observed by authorities. Alcohol use can go undetected for a variety of reasons, as when individuals leave the scene or are transported from it prior to the arrival of police. Because all of these behaviors are illegal, drivers are motivated to misrepresent themselves whenever possible.

Among 1,639 motorcycle drivers involved in trafficway crashes, speeding was the most frequently reported unsafe behavior; over one in five, 27%, were involved in crashes where speeding was a factor. Drivers cited for alcohol use were 12%, and drivers not wearing helmets were 6%. These rates are likely to be underestimates as well, though the helmet-use rate is probably the least underestimated. Missouri's helmet law and the ease with which helmet use can be observed undoubtedly contribute to a high rate of helmet use.

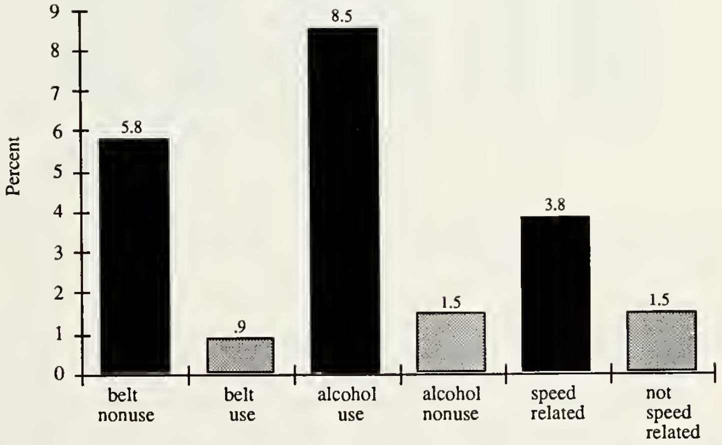

**Figure 1 - Percent of automobile and pick up truck drivers who died or were hospitalized, by each type of driving behavior.**

Drivers under the age of majority (age under 21) are especially prone to exhibit unsafe driving behaviors. Significantly higher rates of lack of seat belt use (29% vs 20%) and involvement in speeding related crashes (22% vs 16%) were shown by younger drivers compared to their older counterparts. Among motorcyclists, younger drivers were significantly less likely to wear helmets (11% vs 5%). Though older drivers were more frequently cited for alcohol use, 4% of young automobile drivers and 8% of motorcycle drivers were cited for alcohol use. These rates should be zero in a group for whom drinking is illegal.

The consequences of unsafe driving behaviors are higher rates of injury and more serious injuries. Among the 46,777 known nonusers of safety belts, 5.8% were injured seriously enough to be hospitalized or die (Figure 1). This is significantly higher than the rate of .9% among belt users. Drivers using alcohol were hospitalized or died at the rate of 8.5%, significantly more often than the 1.5% of drivers not cited. Being involved in a speeding-related crash was only slightly less dangerous; 3.8% of drivers in these crashes were hospitalized or died compared to 1.5% of drivers in other crashes, a significant difference. Relative risks are 6.1 for lack of belt use, 5.7 for alcohol use, and 2.5 for speeding-related crashes.

**Continued on page 174**

**TABLE 2 - First Admission Hospital Charges for Drivers of Automobiles, Vans and Pickup Trucks, by Expected Payment Source and Seatbelt Use**

| Pay Source | Seatbelt Used | | Seatbelt Not Used | | Use Unknown | | Total | |
|---|---|---|---|---|---|---|---|---|
| Government | 230 | 2,953,660 | 319 | 6,891,754 | 19 | 228,232 | 568 | 10,073,646 |
| Private | 1,008 | 9,579,078 | 1,386 | 18,111,280 | 86 | 1,758,003 | 2,480 | 29,448,361 |
| Self/None | 204 | 1,348,773 | 518 | 5,305,812 | 31 | 212,234 | 753 | 6,866,819 |
| Unknown | 15 | 67,793 | 14 | 60,542 | 0 | 0 | 29 | 128,335 |
| Total | 1,457 | 13,949,304 | 2,237 | 30,369,388 | 136 | 2,198,469 | 3,830 | 46,517,161 |

Note: There were 3,983 hospital admissions; for 153 the charges were unknown.
Government pay source includes Medicare, Medicaid, Maternal and Child Health, and other government. Private paysource includes Blue CrossBlue Shield, Workers' Compensation, HMO and other.

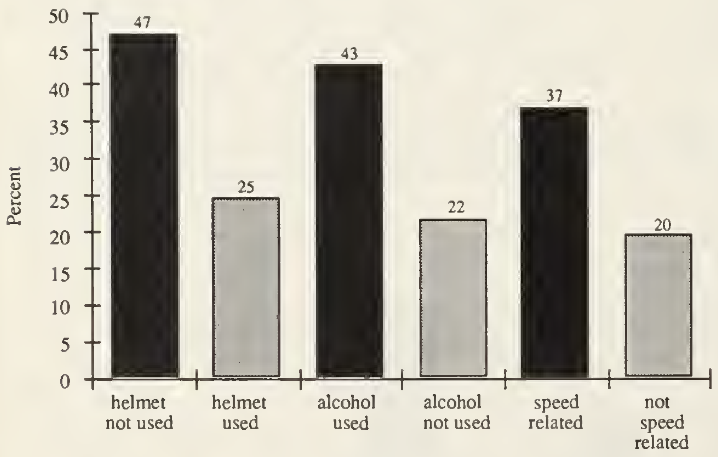

**Figure 2 - Percent of motorcycle drivers who died or were hospitalized, by each type of driving behavior.**

**Continued from page 173**

Death rates impart an even grimmer message. The relative risk of dying when seat belts were not used jumped to 15.5 (.93% vs .06%). For alcohol use the relative risk was 5.5 (1.1% vs .2%), and being involved in a speeding related crash had a relative risk of 3.4 (.62% vs .18%). (All differences statistically significant.)

Motorcycle drivers, being exposed and driving a vehicle with a weight disadvantage, fare even less well when involved in trafficway crashes. Rates of hospitalization or death are relatively high even among drivers who used helmets and weren't cited for drinking or speeding; nevertheless, those who failed to practice safe driving habits had approximately twice the rate of hospitalization or death of the safer drivers. As Figure 2 shows, almost half of the drivers who failed to wear a helmet or who used alcohol were hospitalized or died. Over a third of those involved in a speeding related crash were hospitalized or died. (All differences statistically significant.)

Related to the poor outcome for motorcycle drivers who fail to wear helmets is their significantly greater risk of head injury. Among those hospitalized, 11% of those not wearing helmets had a head injury. This is two times the rate of 5% found among hospitalized helmet wearers.

As noted earlier, a myriad of factors operate at the moment of an automotive crash. The confounding of variables associated with the behaviors studied here make it difficult to isolate the precise roll of any one behavior. Drivers who fail to use seat-belts or who speed will differ from other drivers in a variety of ways, including a tendency to practice other unsafe driving behaviors. Among the automobile and pickup truck drivers, for example, 12% of drivers not using seatbelts were reported as using alcohol. This compares to 4% of the belt users, a significant, three-fold difference. Looked at from the other direction, 48% of the drivers reported as using alcohol were not using seat belts, more than double the 20% of nondrinking drivers who were not using seat belts.

In Table 2 the first-admission hospital charges for automobiles and pickup trucks by expected pay source and seatbelt use are shown. The total charges for drivers of automobiles, vans and pickup trucks was 46.5 million dollars. Because 153 of the linked hospital records were missing charges, and because we were not able to link all motor-vehicle related hospitalization records, the total charges for Missouri in 1990 would actually have been greater than $46.5 million.

Patients who did not use a seatbelt made up 58% of the motor-vehicle crash patients and 65% of the charges. The average first-admission charge for non users was $13,576, a significant excess of $4,002 over the average charge of $9,574 for seatbelt users. For the 2,237 non users, this excess totals nearly 9 million dollars ($8,952,474).

We may not all share in the pain and emotional trauma resulting from a motor vehicle crash, but as Table 2 indicates, every crash affects every one of us. The expected source of payment points up the contribution in tax dollars we all make to the care of crash patients. Nearly 22% of hospital charges show medicare, medicaid, or some other government source as the expected source of payment. Our contribution does not end here. More than 29 million dollars were paid by private insurance sources, and nearly 7 million dollars in charges were not covered by government or private insurance sources. These dollars put upward pressure on insurance rates.

## CONCLUSION

Unsafe driving behaviors increase the risk of tragic outcomes for drivers, passengers, family members, friends, and all other motorists who are unfortunate enough to be drawn into a crash by another driver. To call any of these practices a personal liberty is to ignore the toll they take on the rest of us, either through our misfortune in being directly involved, or through the burden they place on public and private insurance.

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## The Author

Mark Van Tuinen, PhD, is Chief of the Bureau of Health Services Statistics of the Missouri Department of Health.

**Reprint requests to:**
**Dr. Van Tuinen**
**P.O. Box 570**
**Jefferson City, MO 65102**
**tel. 751-6274; fax 526-3621**

**MANAGED CARE - Continued from page 171**

4. A summary of the physician's responsibilities under prepaid or capitated arrangements;
5. Copies of the appropriate paperwork or referral orders for each plan.

The office staff will need this same information as well as all the contract requirements related to billing and records processing. This information will include: 1) how to determine in which plan the patient is enrolled, 2) who and how to bill and what time constraints are required, 3) patient deductibles, co-pays, or per visit fees required, 4) quality assurance and utilization review requirements of each plan.

Although this information is similar to much of that required by existing commercial indemnity plans, there is currently little difference in the requirements among various plans. On the other hand, managed care contracts differ greatly from plan to plan. These differences will require an efficient information management system which, most likely, will increase the cost of practice overhead.

The increased costs will be in the form of additional office personnel, new or upgraded computer systems, or both. If the practice has a limited number of managed care contracts, a manual information system might be adequate to handle the practice needs. However, additional office staff may be required to maintain the system.

If the practice is active in managed care, an automated system needs to be considered. This could consist of adding software to existing computer systems or the purchase of both computer hardware and software that will provide the information access to manage numerous contracts. Consideration needs to be given to this system early in the managed care cycle.

Healthcare reform is a reality, not just an idea for the future. Managed care is one of the many facets of the healthcare environment that presents new challenges to the physician practice. Careful planning is necessary to limit the impact of managed care on the earnings potential of the practice.

Mr. Larry L. Harris, CPA, is Vice President, Finance, for Memorial Community Hospital in Jefferson City, Missouri. He is a frequent consultant to Dulle & Associates, P.C., Certified Public Accountants, Medical Specialty Group in Jefferson City, Missouri.

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# Decision Support Systems: Fact and Fiction

J. Craig Klimczak, DVM and E. Andrew Balas, MD, PhD

**Computers perform tasks daily that aid people in the completion of their duties; computers help drive cars, cook food, entertain, and support our decision making processes. Often a silent partner, the computer is involved in tasks that a health professional provides. Modern ECG machines, infusion pumps, blood analyzers, ventilators, and imaging machines contain computers that aid in the use of these devices. Though not traditionally considered decision support systems, these diagnostic systems support the decision making process in health care.**

**Shortliffe EH et al[1] define the kinds of decision support systems by the roles they play in the decision making process. The authors state that any computer system that deals with clinical data or medical knowledge is intended to provide decision support. This article will discuss fact and fiction regarding decision support systems beginning with information systems that support the decision making process to more sophisticated knowledge based systems that provide interpretation and analysis of data.**

### Decision support systems provide tools for information management.

Tools for information management include hospital information systems and bibliographic retrieval systems. Although not traditionally considered decision support systems, hospital information systems (HIS) play a role in decision support in a general, non-specific manner. Hospital information systems organize, store, analyze, and report information gathered in the hospital. The decision-making process requires the physician to pull pieces of information together, interpret them and make a decision. HIS provide the physician with these pieces of information in a timely and organized manner. Using the computer power to quickly retrieve the necessary information and to graphically illustrate important data, the physician can make decisions faster and with greater confidence. Some integrated hospital information systems contain embedded intelligent systems which process data and knowledge with an inference engine to provide the physician patient management feedback and advice, alerts for potential adverse reactions, treatment protocol critiques, and diagnoses.

Similarly, bibliographic retrieval systems are not typically considered decision support systems, however, they can also quickly retrieve information necessary for decision making. Just by entering a few key words, physicians can retrieve the latest information pertinent to the clinical case currently being managed. Both HIS and bibliographical retrieval systems provide the data and knowledge needed by the clinician. But these systems do not help physicians to apply that information to a particular decision task. Interpretation is left to the physician, as is the decision about what information is needed to resolve the clinical problem.

### Decision support systems provide tools for focusing attention.

Tools for focusing attention provide a new level of information to physicians. These decision support systems are most commonly found associated with clinical, laboratory and pharmacy systems. These computers have the ability to check their information against normal values and known drug interactions. Physicians now receive laboratory reports with "out of range" values flagged for attention. Pharmacy and inpatient order entry systems check prescriptions against known drug interactions and allergies to alert physicians of possible adverse reactions.[2-4] These systems are generally designed to use simple logic to remind physicians of diagnoses or problems that might otherwise have been overlooked. Many of these incorporate fixed lists or paragraphs as a standard output.

### Decision support systems provide direct analysis of patient systems.

The most ubiquitous use of decision support systems is in the area of direct analysis of patient systems. Practically every commercial ECG system sold today provides some form of ECG analysis.[5] Computerized programs for interpretation of arterial blood gas results and interpretation of pulmonary function tests are commonly used.[2] Systems for cytologic recognition and classification, originally developed by Bartels[6-10] and colleagues,[11-14] are often found in automated differential blood count analyzers. The practice of modern medicine depends upon advances made in medical diagnostic decision support systems. Decision support systems provide tools for patient-specific consultation.

Tools for patient-specific consultation represent the classic decision support system that provides direct advice to patient-specific problems. Patient-specific data is analyzed by the system to generate advice relevant to the patient's medical problem. Such systems can provide differential diagnoses, rule outs, lists of etiologic possibilities and a multitude of medical recommendations tailored to the patient's own medical problems.

Several well-known examples of patient-specific decision support systems are AI/RHEUM, ILIAD, MYCIN, INTERNIST, and QMR. AI/RHEUM, originally developed at the University of Missouri-Columbia, can aid physicians in the diagnosis of rheumatologic diseases. The system is designed to query the user for a patient's signs and symptoms. As the system gains knowledge, the questions become more focused on the specific information needed to make a rheumatologic diagnosis. Validation studies have indicated that AI/RHEUM can perform as well as a panel of expert rheumatologists by correctly identifying the disorder over 90% of the time.[15-20]

### Decision support systems do not provide the ultimate answer.

Although it was once thought that patient-specific consultation systems could be used to replace human cognition in the diagnosis of disease, none are in widespread use at the present time.[21] Many years of research and millions of dollars of expenditures have failed to produce omnipotent diagnostic computer systems. However, much knowledge has been gained on human diagnostic problem solving and about what types of decision support systems are really needed by those providing health care.

Much of what has been learned has resulted in philosophical changes in the perceived role for decision support systems. Originally, it was expected that these systems could be consulted with the findings from a difficult case and the system would return the appropriate diagnostic answer, however, as Miller[22] has pointed out, there are many fatal flaws in this model.

Miller states that a physician cannot convey his or her complete understanding of an involved patient case to a computer program. No matter how much time and effort goes into data input into the computer system, one can ever assume that a computer program "knows" all that needs to be known about the patient case. As a result of this and other critiques of this model,[23-27] many researchers have refocused their efforts toward systems that take advantage of the users cognitive abilities and the system's information processing abilities. The goal is to improve the performance of both the user and the machine over their native (unassisted) states, thus these systems are known as *performance support systems* rather than decision support systems.

## CONCLUSION

Decision support systems are widely used in the practice of medicine today. Many times these systems are embedded within traditional information systems such as hospital information systems and bibliographic retrieval systems. Often decision support systems are overlooked because they are embedded in laboratory and diagnostic equipment. These embedded decision support systems often provide higher levels of consistency and reliability than the human counterparts. Decision support systems that provide physician feedback and alerts are successful in settings where they are employed.[28] Current medical decision support systems that make diagnoses based on physician entry of clinical information have not been widely accepted nor have they replaced the need for the physician to be highly skilled and trained in medical problem solving. The current trend in research on decision support systems is aimed at performance support systems that combine data and knowledge bases to present the physician with relevant critical information in time to make the decisions necessary for improved patient care. Perhaps someday, we may have a futuristic science fiction "tricorder" like the one Dr. McCoy used in *Star Trek* that provides us with the exact knowledge and insight into our patients' problems necessary for patient care.

## ACKNOWLEDGEMENT

This article was supported in part by grant number LM07089 from the National Library of Medicine. Its contents are sole the responsibility of the authors and do not necessarily represent the official views of the National Library of Medicine.

**Continued on page 178**

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## The Authors

**E. Andrew Balas, MD, PhD,** is an assistant professor in the Department of Health Services Management of the School of Medicine at the University of Missouri-Columbia. He has current research funding in medical informatics and serves as a faculty member in the Medical Informatics Group.

**J. Craig Klimczak, DVM,** is a post-doctoral fellow in Medical Informatics at the University of Missouri-Columbia. He is a fellow in the American Academy of Veterinary Informatics.

# The Hired Gun Expert Witness

Mary Beck, RN, MSN, JD

**This article briefly discusses the role of the expert physician witness at trial and describes what is emerging as the physician professional witness (AKA hired gun). The trial court's powers to evaluate the professionalism and objectivity of an expert witness are examined in light of a recent Western District Missouri Court of Appeals case. This case, while limited to its peculiar set of facts, permitted both a hearing and production of documents of a physician who had been hired to testify.**

**This article reviews the role of the expert physician witness in Missouri litigation in light of recent caselaw outlining discovery procedures to monitor use of professional witnesses. The term "professional witness" does *not* refer to witnesses who are professionals, but rather to persons who make their entire living witnessing. The Missouri Court of Appeals ruling in *State ex rel. Lichtor v. Clark*, 845 S.W.2d (Mo.App. W.D. 1992) elucidates the Missouri Courts' authority in sorting out unprofessional physicians who would offer unobjective expert testimony. While this particular article is intended for medical readership and discusses expert *physician* witnesses, expert witnesses can come from any profession including engineering, accounting, nursing, etc. It might thus be assumed that the *Lichtor* Court's procedure may be applied to any expert whose objectivity has been put into question.**

## Expert Witnesses

An expert witness is defined as "one who by reason of education or specialized experience possesses superior knowledge respecting a subject about which persons having no particular training are incapable of forming an accurate opinion."[1] Expert witnesses testify in court to assist the trier of fact (judge or jury) to understand evidence. For example, physicians have long testified concerning the cause and extent of injuries in personal injury cases where a person (the plaintiff) is allegedly injured through the ordinary negligence of another (the defendant). Physicians also testify in medical malpractice cases where plaintiff is allegedly injured through the professional negligence of defendant. A testifying physician may have examined plaintiff personally or have simply reviewed medical records authored by other health care providers.

A defendant may request that a plaintiff submit to examination by an independent physician not hired by plaintiff. Such a request or "Motion for Physical Examination" is made during the course of discovery. Discovery is that period of time in a lawsuit after the petition and answer are filed and before trial. During this interval, the parties formally exchange information with the intention of narrowing the issues in dispute, enhancing settlement, and preparing for trial. The expert physician may be deposed during discovery and typically testifies at trial concerning his/her findings. The objectivity of such a physician in forming opinions and testifying accordingly was at the heart of the *Lichtor* case.

## The Hired Gun Expert Witness

In recent years, a phenomenon known as the hired gun witness has emerged in litigation. The *Lichtor* court described the hired gun witness as a "venal" expert whose opinions are available to the highest bidder, a mercenary.[2] It opined that venal physician witnesses posed more danger to fair trials than biased lay witnesses, because physicians are regarded as schooled in clinical objectivity and scientific precision. In short, juries see physicians as impartial professionals and are handicapped in detecting their bias.

## Trial Court, Discovery, & Expert Physician Witnesses

The trial court's broad discretion in the control and management of discovery is derived from the Missouri Rules of Civil Procedure,[3] Missouri Revised Statutes,[4] and the court's "inherent authority to make such reasonable orders as are necessary for the assistance of the finder of fact in its mission of truth-seeking."[5] This responsibility is continuously refined and developed through caselaw.[6] While the trial court's discovery re-

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lated tasks are many, discovery orders relevant to expert physician witnesses include ordering physical examinations by examiners upon motion of a litigant, approving physician examiners, and allowing or disallowing physician testifiers.[7] Parties do not have an absolute right to present expert testimony. If the court finds that a proposed physician expert is unsuitable and will not serve to assist the fact finder whether that be judge or jury, the court may disqualify that expert from testifying altogether.

Even where experts are professionals testifying to objective opinions, the subject of their bias is presented to the jury for consideration. Typically, in a trial on the merits, an attorney will elicit elements of bias from an expert on the stand for the purpose of influencing the weight a listening jury will then accord the expert's testimony. Routine cross examination questions to demonstrate such bias may include:[8]

### ROUTINE CROSS EXAMINATION QUESTIONS OF AN EXPERT WITNESS

1. **Whether the expert is being paid for the time spent testifying and reviewing the records.**
2. **The hourly rate the expert is charging.**
3. **The actual amount of compensation anticipated or already paid.**
4. **How the expert came to be employed as an expert in the instant case**
5. **Whether the expert is regularly employed by a particular category of party, such as plaintiff's counsel, defendant's counsel, or an insurance company**
6. **Previous employment by the same party**
7. **The amount of fees earned in prior cases**
8. **Previous employment in the instant case**
9. **Any previous relationship to parties in litigation.**

These cross examination techniques are commonplace where objective and honest experts testify.

The *Lichtor* case exemplifies the rare occasion where an expert physician witness's *objectivity* and *professionalism* are seriously questioned. The court defined objectivity as "the quality of being free from the influence of personal considerations in the exercise of professional skills and professional judgment."[9]

### The Lichtor Case

*Lichtor* was a personal injury case where plaintiff motorist was injured in a car accident. He sued, and the defendants became the driver of a second car and the plaintiff's own uninsured motorist carrier. Defendants requested that plaintiff be examined by Dr. L. Plaintiff refused objecting to Dr. L's fitness to serve as examining witness. Defendants then made a Motion for Court Order requiring the physical examination, to which Plaintiff responded with a notice of deposition[10] on Dr. L and a subpoena duces tecum[11] for production of various documents related to Dr. L's income and finances, his professional practice, and his professional association with the defendant's law firm. Defendant filed a motion for protective order[12] alleging that Dr. L had a scheduling conflict on the proposed deposition day and asking that Dr. L's reimbursement be set at $300/hour for the deposition testimony.

A hearing was held on the Motions for Deposition and for Protective Order. During the hearing, plaintiff made the following arguments in favor of its deposition of Dr. L:

### PLAINTIFF'S ARGUMENT AGAINST DR. L

1. **Dr. L is not a practicing, treating physician, but instead earns his living as a consultant/testifier.**
2. **Dr. L charges unreasonably high amounts for his time.**
3. **Dr. L's relationship with the defendant's law firm is such that he obtains a substantial percentage of his overall income by testifying in behalf of parties represented by that firm.**
4. **Dr. L uses different criteria for evaluation, depending upon whether he is evaluating for the plaintiff or for the defendant.**

With his arguments supporting deposition, Plaintiff submitted exhibits documenting the following:

### PLAINTIFF'S DOCUMENTARY EVIDENCE AGAINST DR. L

1. **An affidavit from a Kansas City Jury Verdict Service showing that 44% of cases in which Dr. L had testified in the last 4.3 years were all for one law firm the Defendant's law firm.**
2. **Transcript of sworn testimony that Dr. L had avoided service of subpoena offered in light of his testimony that he had not been served.**
3. **Copies of 5 court orders refusing permission to Dr. L to serve as an examining physician.**
4. **Transcript of trial testimony by Dr. L indicating that he wore his K.C. chiefs ring on his left hand if the jury were on his left side and on his right side if the jury were on his right side.**
5. **Transcript of trial testimony by Dr. L acknowledging his informing an attorney that he was altering his proposed evaluation of a claimant.**

Defendants opposed the proposed deposition and Requests for Production of Documents arguing that the discovery was both burdensome and invasive. Defendants also argued that the evidence disclosed by the documents sought were irrelevant to the substantive issues in the case and were merely for impeachment. The court stated that such impeachment information was within the scope of discovery but discoverable only in deposition.[13]

Following hearing, the trial court ordered that the deposition proceed and that reimbursement for that deposition be set at $85/hour instead of the requested $300/hour. Defendants subsequently filed a Writ of Prohibition[14] with the Appellate Court which resulted in the opinion cited in this article.

The Appellate Court affirmed the trial court's procedure indicating that a *threshold burden* must be shouldered by the objecting party in order to trigger a hearing inquiring into the issue of objectivity. A threshold burden is met once it is shown to the court that reasonable grounds exist to believe that the physician lacks objectivity, and that his/her testimony presents a significant risk of confusing, misleading or distracting the jury. Subsequently, the court may hold a hearing and authorize discovery pertinent to the hearing including a deposition of the expert and production of documents. This discovery is intended to ascertain if the physician has a financial interest in the consulting relationship and to investigate private financial matters pertaining to prior service as a testifier.[15] This inquiry may be a precondition to being permitted to serve as expert witness. Factors which may be considered in that hearing over professionalism include:

### FACTORS CONSIDERED IN DETERMINING BIAS

1. **Degree to which physician makes his/her living as a professional testifier.**
2. **The percentage of the consultant's income coming from any one law firm or insurance company.**
3. **The degree to which the expert testifies for only plaintiff or only defendant.**
4. **Expert's willingness to charge a fee based upon result rather than a fixed hourly rate.**
5. **Expert's readiness to offer opinions outside the scope of his/her expertise.**
6. **History of unfair manipulative answers made to cross examination questions on the stand.**
7. **Evaluating claimants on different standards based upon who is paying the bill.**

The expert may be compelled to submit the following personal documents for a determination of the extent of his/her financial interest in the consulting relationship:

### PRODUCTION OF DOCUMENTS AUTHORIZED IN THE LICHTOR BIAS HEARING

1. **Tax returns.**
2. **Records of total income derived from legal consulting.**
3. **Billing records for any one law firm or insurance company**

The *Lichtor* court cautioned that discovery into these factors concerning professionalism should be no more intrusive than necessary and mentioned the concern that excessive use of the procedures could discourage capable objective professionals from testifying.[16] It charged trial courts with delicately balancing the invasion of privacy interests on one hand with the need for accountability on the other. In *Lichtor*, the court ordered those Requests for Production of Documents that were not vague, not unduly burdensome, relevant to evaluation of Dr. L's objectivity, and tailored to assure the accountability of Dr. L's responses as to his professional income. The *Lichtor* court indicated sua sponte[17] that the trial court could, upon request from Dr. L, exercise discretion to reasonably protect against dissemination of Dr. L's private information submitted during discovery.

The appellate court also affirmed the trial court's setting of an $85 per hour fee for deposition of the expert instead of the $300 requested by defendants.[18] The court sets such fees where the parties are unable to agree. The court stated that this type of deposition was not an examination of an expert witness pursuant to Rule 56.01(b)(4) meaning the deposition would not inquire into the medical opinions of the reviewing or examining physician regarding the instant case. Rather this deposition was an examination of a person to elucidate whether he would be a suitable expert witness. The court indicated that the reimbursement should be great enough to dissuade parties from unduly prolonging the deposition but reasonable so that neither party could use it as a lever to burden the other party during discovery.

The appellate court in *Lichtor* affirmed the procedure set out by the trial court so that deposition of and document production by Dr. L could proceed. Whether Dr. L subsequently complied with the discovery and/or whether the court found him suitable is of course not in the appellate opinion. If Dr. L. refused to submit to the hearing or refused to produce documents, or if the court found him to be biased; the only sanction to Dr. L and to the party for whom he worked would be disqualification of Dr. L in the instant case.

## SUMMARY

In summary, Missouri has experienced the emergence of professional witnesses in the field of medicine,

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and *Lichtor* represents the court's attempt to set out a procedure by which to monitor and curtail the testimony of venal expert witnesses. The procedure set out in *Lichtor* permits a hearing with pertinent discovery namely deposition of the expert and his/her production of personal documents. The purposes of the hearing and the discovery are to evaluate the accountability of the expert's responses as to professional income, the expert's objectivity, the relationship between the expert and the party hiring him/her, and the extent of the expert's active medical practice. Few physicians are likely to endure discovery of this nature. Such procedure is reasonable *only* where parties have shown sufficient legal reason to substantially question an expert's professionalism.

This material was presented at the Annual Medical Legal Symposium, September 1993, Columbia, Missouri.

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6. for example, see *State ex rel. Metro. Transp. Services, Inc. v. Meyers*, 800 S.W.2d 474, 476 (Mo.App. 1990).
7. *State ex rel. McCloud v. Seier*, 567 W.W.2d 127 (Mo.App. 1978).
8. *Lichtor* at 64-65.
9. *Lichtor* at 62.
10. A deposition is a discovery device by which one party asks oral questions of a witness (or other party) outside the courtroom and a word for word transcript is made. Black's Law Dictionary 396 (5th ed. 1979).
11. A subpoena duces tecum commands a witness to produce a document or paper in his/her possession that is pertinent to the issues of a pending controversy. Black's Law Dictionary 1279 (5th ed. 1979).
12. A protective order is any court order whose purpose is to protect a person from further harassment or service of process or discovery. Black's Law Dictionary 1101 (5th ed. 1979).
13. *Lichtor* at 66 quoting *Willis v. Brot*, 652 S.W.2d 738 (Mo.App. 1983).
14. A writ of prohibition is filed with a superior court asking it to command a judge and parties of a suit in an inferior court to cease or to stay within its jurisdiction. Black's Law Dictionary 1091 (5th ed. 1979).
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# Calvarial Defect Reconstruction

David F. Jimenez, MD and Constance M. Barone, MD

**The history of skull trepanation is almost as old as that of humanity. For thousands of years it has been performed for the treatment of numerous medical maladies. The Andean Incas, early Asians and South Seas Islanders, are amongst the many people to perform calvarial trepanation. Hippocrates described techniques for the use of the trepan in early Greek times.[1] With the production of a skull opening comes the challenge of developing methods for closing the defect. It is in reality, more challenging to repair the defect than to create it. Man, with his never ending ingenuity, has tried to develop many techniques. We will discuss some of them and present our method of choice for closure of skull defects.**

In civilian practice, cranial defects are most commonly due to surgical intervention. Not uncommonly, patients with severe head injury and in whom malignant intracranial hypertension is anticipated, the surgeon may choose not to replace the bone flap, thus creating a large defect after surgical intervention. Severe, open depressed contaminated skull fractures preclude the placement of the dirty bone fragments after debridement. Surgery for removal of skull tumors (fibrous dysplasia, eosinophilic granulomas, osteoid osteomas, etc.) leave large skull defects. Intracranial meningiomas may infiltrate adjacent bone requiring its removal. Infectious processes such as osteomyelitis of the skull often necessitate removal of the affected bone. Large (and small) calvarial defects may be found as part of congenital anomalies (encephalocele, etc). In military practice and in times of war, gunshot wounds, shrapnell, and other cranial trauma account for the majority of cranial defects requiring repair. All these conditions require that the surgeon taking care of these patients have versatile knowledge in the field of cranioplasty.

## CRANIOPLASTIC TECHNIQUES

The methods and materials used for reconstruction of calvarial defects vary significantly depending on the type of material used and the techniques used for reconstruction. Based on the materials used, two broad and general categories can be designated: Alloplastic and Autogenous grafts.

## ALLOPLASTIC GRAFTS

### Metallic Grafts:

Boothe and Curtis were the first to use a metal plate in 1893 to close a cranial defect.[2] Although the patient died 10 days after the operation, a large array of metals have been used since the original use of aluminum. Other metals used include thin gold plates, silver, and platinum. Lead plates were used by Maunclarre in 1908.[3] As expected his patients developed lead poisoning which led to the abandonment of its use. By mid-twentieth century, metals were researched and many nontoxic materials were developed. In the 1940s, metal alloys became popular. Ticonium (nickel, cobalt, chromium) and vitallium (cobalt, chromium and molybdenum) were successfully used. Tantalum, stainless steel mesh and plates became popular in the 1950s and more recently, titanium has become the metal of choice.

### Non-Metallic Grafts:

Celluloid was used in 1890 by Frankel.[4] By 1906 its use was abandoned as it became clear that many of the patients developed fistulas and infections. With the refinement of production of plastics following the World Wars, acrylic resins were developed. Of these, methyl-methacrylate, trade names which include Vitacrilic, Lucite Plexiglas, and Crystallite, has become the most widely used by neurosurgeons throughout the world. Zander was the first to use this acrylic in a patient in 1940.[5] It has a tensile strength of

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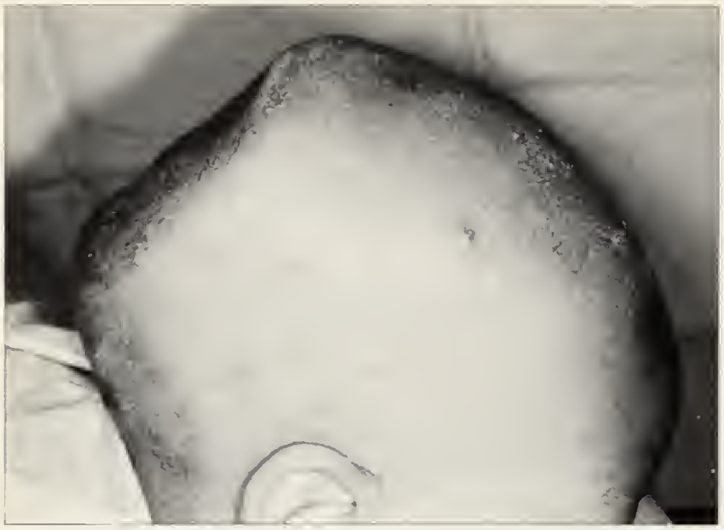

Figure 1 - Preoperative lateral photograph of patient depicting large 8x10cm occipital parietal skull defect. Patient is in the modified prone position. Ventriculoperitoneal shunt is noted behind the right ear.

Continued from page 183

4,000 to 7,000 pounds per square inch and flexural strength of 10,000 to 15,000 pounds per square inch and begins to soften at 150°. Its biological inherent strength and malleability makes this material an ideal alloplastic material for the use in cranioplasties. Its use has been wide spread since Spence described a one stage method in 1954.[6]

## BONE GRAFTS

### Autogenous Grafts:

The patient's own bone may be used to aid in the reconstruction of calvarial defects. Osteo-periosteal grafts from the tibia were used as early as 1898 in Germany.[7] Iliac bone free grafts, free rib grafts, scapular and sternal

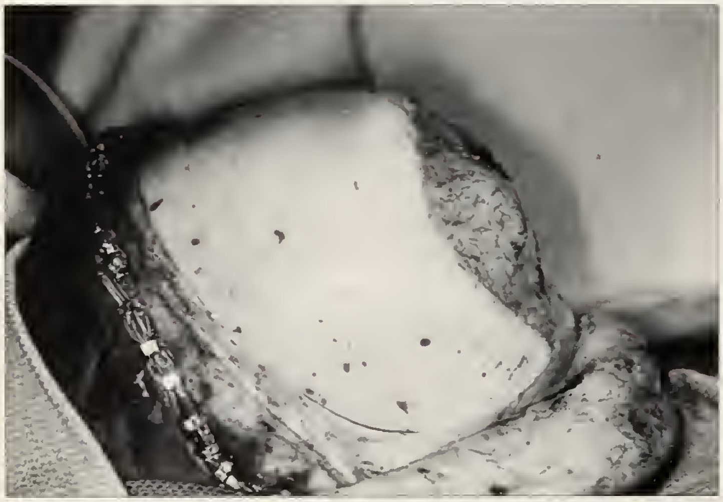

Figure 3 - Lateral photograph demonstrating reflected scalp and pericranial flaps. The edge of the bony defect is seen. Note well vascularized dura over occipital lobe.

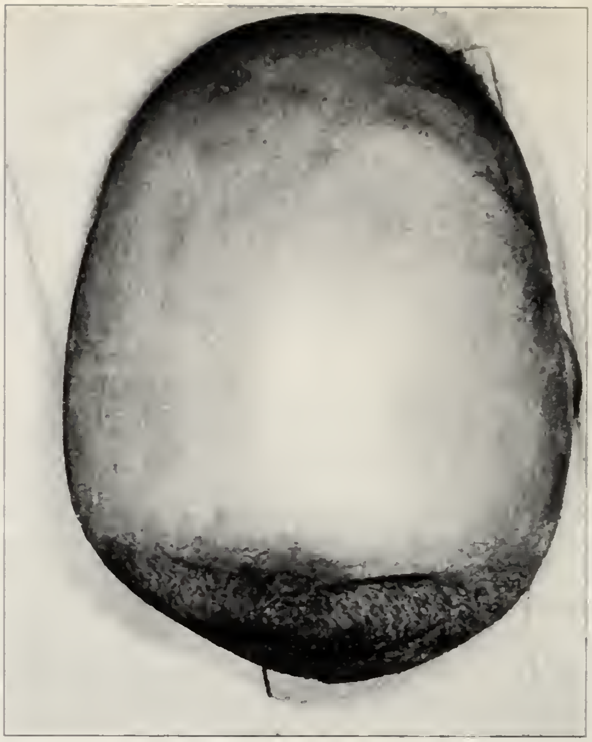

Figure 2 - Preoperative areal view of large occipital bone defect.

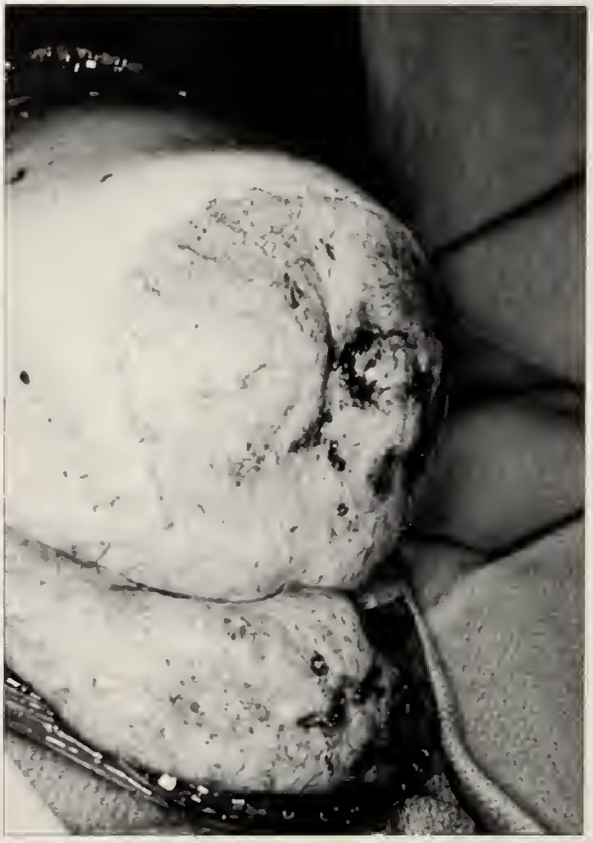

Figure 4 - Posterior view of skull. Dura overlying both occipital lobes is seen. The midline torcular heterophilli, or confluence of sinus is noted at the center of defect.

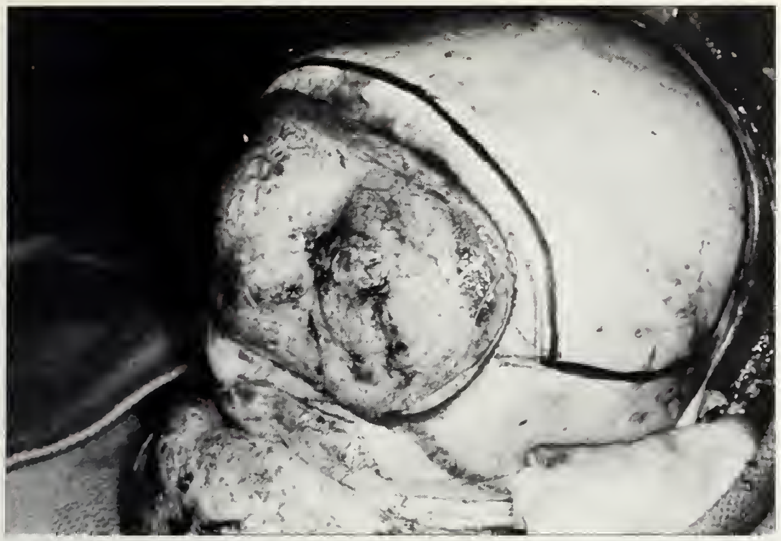

Figure 5 - Outline of designated donor site anterior to skull defect.

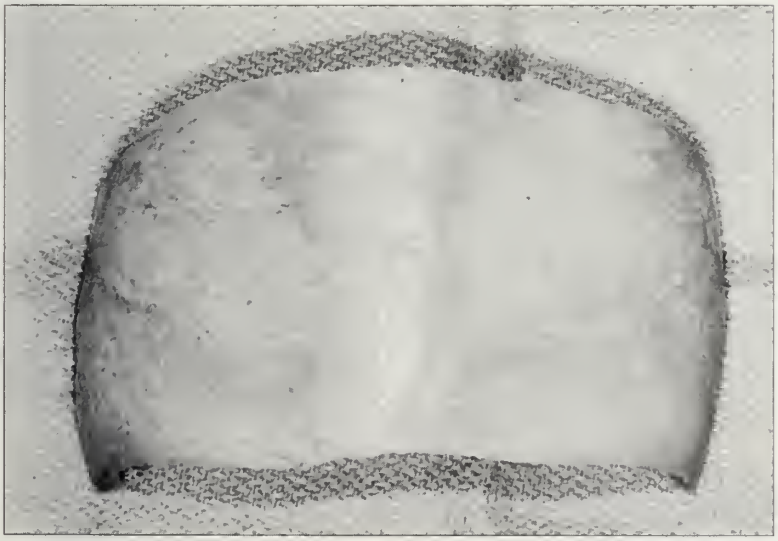

Figure 6 - Full thickness calvarial graft removed from parietal region.

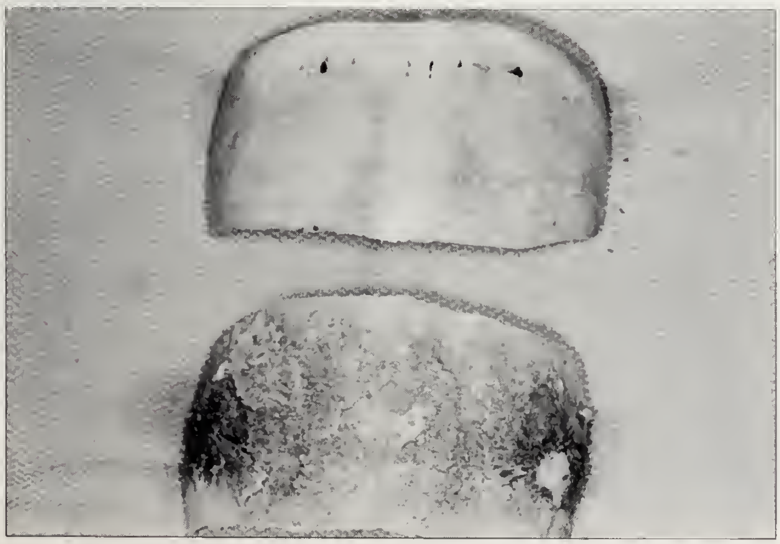

Figure 7 - Calvarial graft has been split into two symmetric halves by cutting to through the diploic space.

grafts have been used by many surgeons to repair such skull defects. The use of calvarial grafts was first begun in 1889 by W. Müller who corrected a skull defect by slinging a flap of skin, pericranium and outer table into the calvarial defect. The patient did very well and its subsequent use became wide spread. Our preferred method of choice for repair of skull defect is the use of a free calvarial split thickness graft. Homogenous (cadaver skull) and heterogenous grafts (dog, hog, rabbit, pig bone) have been used in the past but are not commonplace in today's surgical armamentarium.

## CASE REPORT

The patient is a 2-year-old boy who was born with an occipital encephalocele and who was found to have a large bioccipital cranial defect (Figs 1 and 2). He underwent primary closure of the encephalocele without difficulties. He was subsequently seen in consultation for repair of the large cranial defect. Because of his young age he was allowed to reach the age of 2 years before surgery. This allowed his skull to obtain a thickness of at least 5mm.

### Procedure

He was taken to the surgical suite and placed in a modified prone (Sphinx) position which allowed access to the entire calvaria (Fig 3). Examination of his defect revealed that it was 10x8cm in size and its epicenter was at the torcular Herophili (junction of the sagittal, straight, and transverse venous sinuses). A biparietal skin incision was made and the scalp flap was elevated from the underlying dura and sinuses (Fig 4). The scalp flaps were also elevated anteriorly to expose the superior and medial parietal bone (Fig 5). Using a high speed (73,000 rpm) Midas Rex® drill, a craniotomy was performed which was molded to fit the cranial defect (Fig 6). The free bone flap graft was then split into an outer and inner table (Fig 7) using the drill bits as well as osteotomes.

The outer table was then replaced at the donor site and the inner table was placed at the original calvarial defect site. The bone grafts were secured in place with several titanium microplates and screws (Figs 8 through 10). A pericranial flap, which had previously been developed, was used to cover

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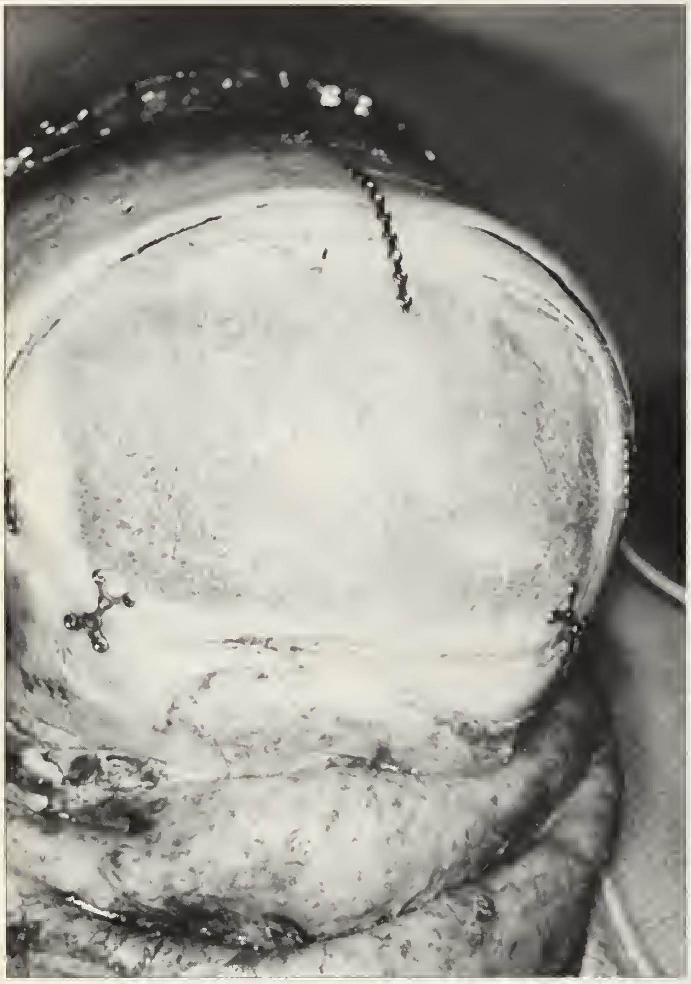

Figure 8 - Inner table of skull placed over calvarial defect and rigidly fixed with titanium microplates and screws.

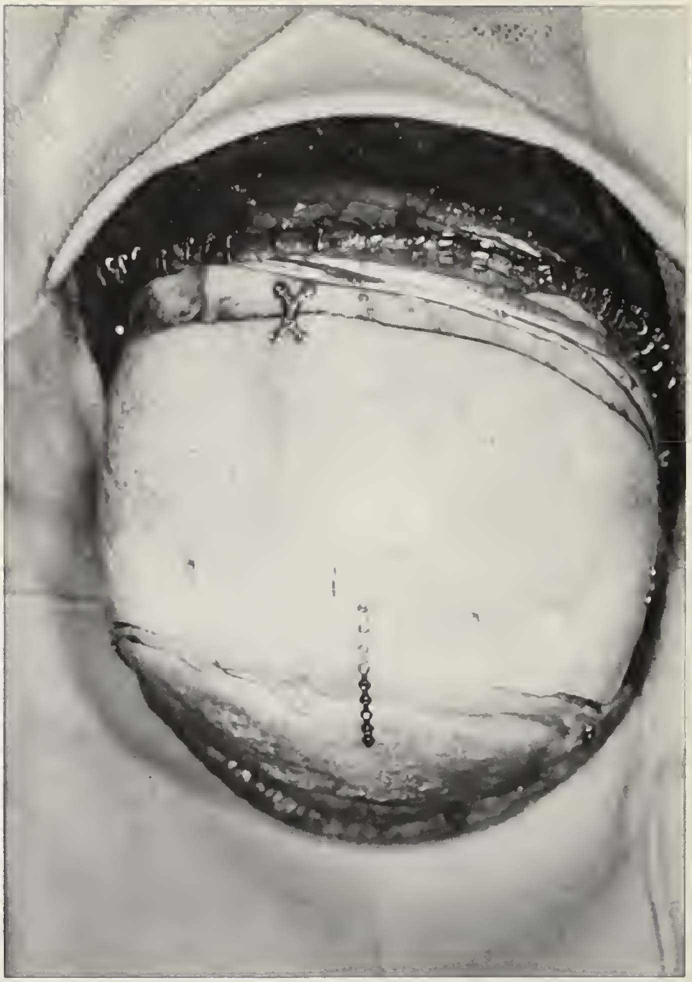

Figure 9 - Outer table of the skull repositioned over donor site and fixed in place with plates and screws.

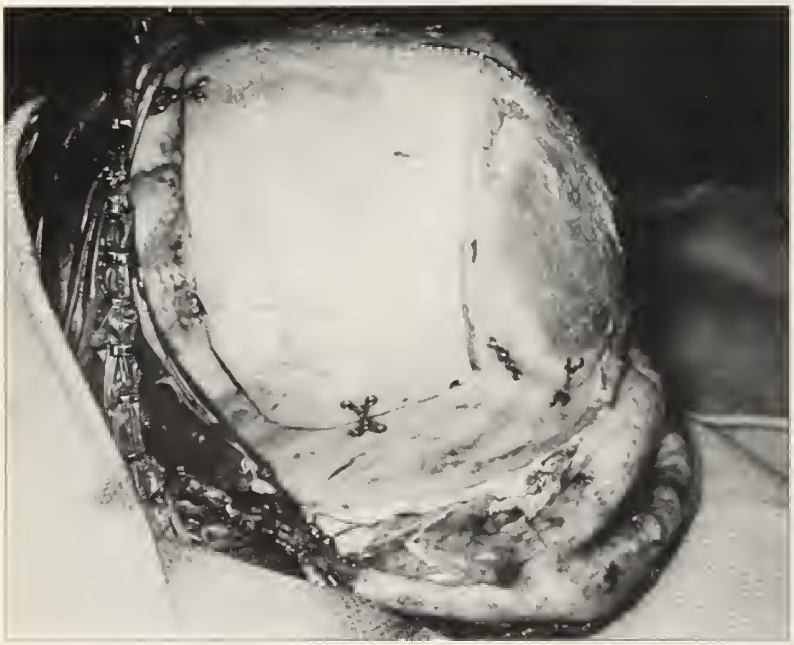

Figure 10 - Lateral view showing complete coverage of the skull defect.

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the plates and the graft bilaterally. The scalp was closed and a subgaleal drain was left in place. The final result immediately postoperative is seen in Figs 11 and 12. The patient was discharged on his sixth postoperative day and has done well without any complications.

## DISCUSSION

The closure of calvarial defects can indeed by challenging and difficult at best. Although many methods have been tried, today only a few remain viable choices. Most neurosurgeons use acrylic (methyl-methacrylate) for the repair of cranioplasties with much success. The reported infection rates vary between 1 and 8 percent.[8] For adult patients this is not unreasonable. However, children with cranial defects pose a different problem. Because of their continued head growth a large defect coverage with acrylic may pose a

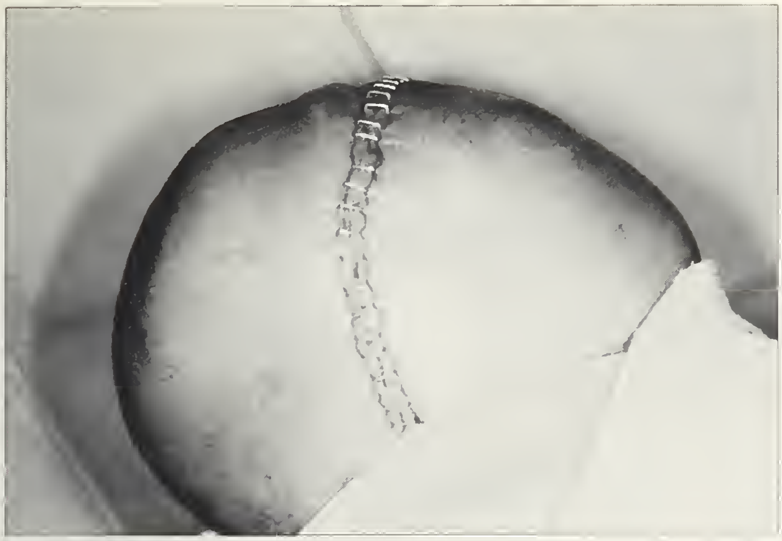

Figure 11 - Postoperative lateral view.

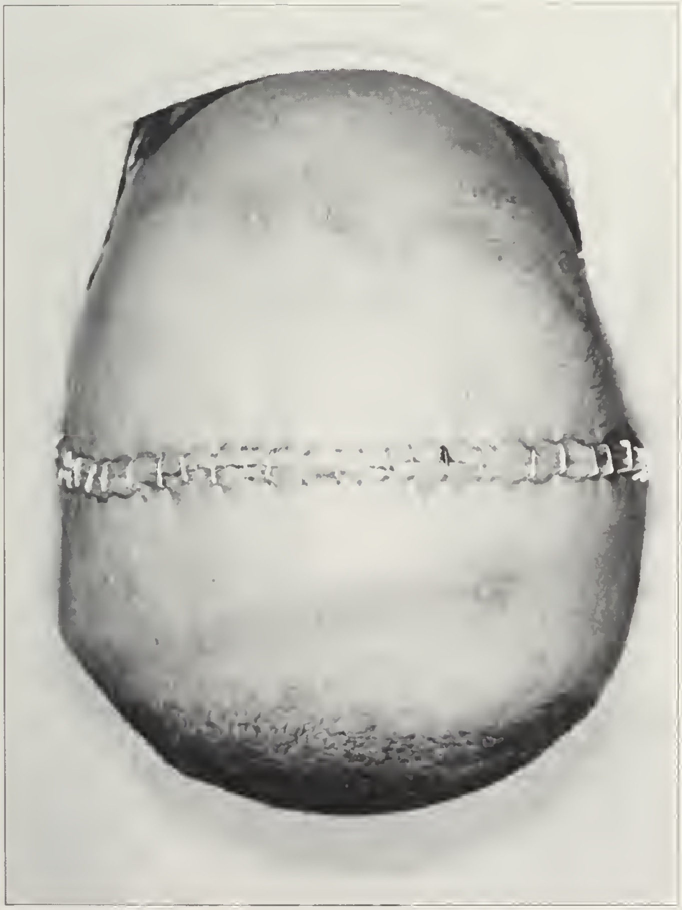

Figure 12 - Postoperative areal view.

problem as the child grows. The wires or sutures which hold the acrylic plate in place eventually pull out causing the plate to become free and floating. This may cause headaches, localized pain and bothersome noises.

Our method of choice for closure of skull defects in children and adults is the autogenous bone graft. As explained in the case report, a template of the cranial defect may be used to remove a similar piece of bone from a normal area. Splitting the bone then allows closure of the skull defect with the patient's own bone. This, we believe is a more physiologic approach since there is no foreign material and the bony fusion will allow complete closure of the skull defect. The cosmetic results are excellent. We have had no infections in 40 consecutive split calvarial graft procedures.

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## The Authors

David F. Jimenez, MD, is an assistant professor of Neurological Surgery and Child Health and Constance M. Barone, MD, is an assistant professor of Plastic and Reconstructive Surgery and Child Health at Children's Hospital-University Hospital and Clinics, Columbia, Missouri.

**Send correspondence to:**
**David F. Jimenez, MD**
**Division of Neurological Surgery**
**One Hospital Drive**
**N521**
**Columbia, MO 65212**

# The Effect of Physical Activity on All Cause Mortality Compared to Cardiovascular Mortality: A Review of Research and Recommendations

Tom LaFontaine, PhD, Sue Dabney, MEd, MPH, Ross Brownson, PhD, Carol Smith, MSPH

**The American Heart Association states that sedentary lifestyle is a major risk factor for CVD comparable to hypercholesterolemia, hypertension, and cigarette smoking. Nearly 60% of Missourians are sedentary. This article reviews and summarizes recent literature on physical inactivity and mortality, makes recommendations to physicians regarding exercise and health benefits, and discusses the contributions physicians can make toward increasing physical activity levels in their patients.**

Hahn et al reported that 23.3% of deaths from nine chronic diseases were attributable to sedentary lifestyle.[1] In Missouri, sedentary lifestyle accounted for 34.6% of coronary heart disease deaths in 1988.[2] These findings and accumulating evidence demonstrating a graded, inverse relationship between physical activity (a behavior pattern which can be defined in terms of daily energy expenditure) or cardiovascular fitness (the amount of aerobic work which can be performed at maximum effort) and all-cause and cardiovascular mortality has prompted several prominent organizations to recommend a public health campaign to increase physical activity levels among US citizens.[3-8]

Although there has been an emerging consensus regarding guidelines for physical activity to promote health, a 1990 survey of 295 Missouri primary care, internal medicine, and gynecological physicians revealed the following: 1. forty-two percent of the physicians reported a sedentary lifestyle, 2. only 26% believed sedentary lifestyle had a large effect on CVD, and 3. fifty-one percent felt lack of reimbursement for lifestyle counseling reduced the likelihood of conducting these activities in the physician's office.[9] In this article, we; 1) review recent data in support of these public health recommendations, 2) discuss the contributions physicians and other health care providers can make toward increasing physical activity levels, and 3) make specific recommendations regarding the quantity and quality of exercise for health benefits.

## METHODS

Pertinent articles were selected for review based on the following criteria; 1) sample size of >500, 2) subjects were apparently healthy and free of serious disease at the time of entry into follow-up, 3) length of study was five years or longer, 4) physical activity and/or cardiovascular fitness were assessed at baseline, 5) age of subjects at entry was >20 yrs, 6) endpoints included all-cause and/or CVD/CHD mortality (CVD/CHD included death from stroke, heart attack, or sudden death), and 7) study was published in the English literature between 1983 and 1993. Each identified article was reviewed and summarized.

## RESULTS

Table 1 summarizes findings in the studies selected.[10-31] The studies comprised a total of 129,658 men and 29,933 women who were apparently healthy at entry into each respective study. Subjects ranged in age from 20.1 to 85+ years. Follow-up varied from 4.8 to 45 years. Nine studies measured baseline cardiovascular fitness (CF). Sixteen assessed leisure and/or occupational physical activity (PA). Three reports included baseline information on CF and PA. Risk ratios for all-cause mortality comparing the highest versus the lowest CF or PA groups ranged from 0.32 to 1.18. Comparing moderate vs low CF or PA groups, risk ratios for all-cause mortality varied from 0.41 to 1.21. Relative to CVD/CHD, mortality risk ratios ranged form 0.12 to 1.06 when comparing the highest versus lowest CF or PA groups. Ratios for CVD/CHD mortality comparing moderate vs low CF or PA groups were between 0.32 to 1.98. The median risk ratio was 0.59 for all-cause mortality comparing high vs low CF or PA groups and 0.83 for moderate vs low CF or PA groups. The median risk ratio for CVD/CHD mortality comparing high and moderate vs low CF or PA were 0.45 and 0.73, respectively. The three studies which assessed both CF and PA found significant correlations between these two parameters. Blair et al. reported correlations of 0.70 to 0.80 between CF and PA. These findings supported the contention that the level of CF is influenced substantially by behavior; a lifestyle which includes regular moderate to vigorous PA.

## SUMMARY AND RECOMMENDATIONS

The results of this review clearly demonstrated a consistent, strong, independent, temporally correct, graded, and plausible relationship between CF or PA and all-cause

### TABLE 1

### Summary of Results of Recent Studies on Physical Activity and Cardiovascular Fitness, All-Cause CVD/CHD Mortality

| | MEASURE | | SUBJECTS | | | | MORTALITY RISK RATIO ALL-CAUSE | | MORTALITY RISK RATIO CVD/CHD | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ref # | CF | PA | MEN (N) | WOMEN (N) | AGE (YRS) (ENTRY) | F-UP (YRS) | HI VS LOW | MOD VS LOW | HI VS LOW | MOD VS LOW |
| 10 | YES | NO | 2,779 | 0 | 35-64 | 4.8 | NA | NA | 0.45 | NA |
| 11 | YES | NO | 2,136 | 0 | 26-64 | 7.0 | NA | NA | 0.21 | 0.42 |
| 12 | NO | YES | 1,166 | 0 | 45-64 | 24.0 | 0.59 | 0.72 | 0.62 | 0.76 |
| 13 | YES | YES | 2,109 | 0 | 40-45 | 5.0 | NA | NA | 0.35 | 0.75 |
| 14 | NO | YES | 636 | 0 | 45-64 | 20.0 | 1.18 | NA | 0.60 | NA |
| 15 | NO | YES | 12,138 | 0 | 35-57 | 7.0 | 0.84 | 0.71 | 0.64 | 0.63 |
| 16 | NO | YES | 7,221 | 0 | 45-64 | 12.0 | NA | NA | 0.69 | 0.97 |
| 16 | NO | YES | 423 | 0 | 65-69 | 12.0 | NA | NA | 0.43 | 0.67 |
| 17 | YES | YES | 3,106 | 0 | 30-69 | 8.5 | 0.56 | NA | 0.13 | 0.82 |
| 18 | NO | YES | 3,127 | 1961 | 30-59 | 6.0 | NA | NA | 0.83 | NA |
| 19 | YES | NO | 10,224 | 3120 | 40-60 | 8.2 | 0.32 | 0.41 | 0.12 | 0.32 |
| 20 | NO | YES | 3,043 | 0 | 20-70 | 18.5 | 0.88 | 0.83 | 0.75 | 0.73 |
| 21 | NO | YES | 10,376 | 17,282 | 25-80 | 6.0 | NA | NA | 0.50 | 0.66 |
| 22 | NO | YES | 9,376 | 0 | 45-54 | 9.3 | 0.65 | NA | 0.25 | 1.98 |
| 22 | NO | YES | NA | 05 | 5.64 | 9.3 | NA | 0.81 | 0.53 | 0.59 |
| 23 | NO | YES | 12,138 | 0 | 30-57 | 10.5 | 0.88 | 0.86 | 0.80 | 0.74 |
| 24 | NO | YES | 10,269 | 0 | 45-84 | 8.0 | 0.52 | 0.71 | 0.41 | 0.83 |
| 25 | YES | YES | 1,960 | 0 | 40-59 | 16.0 | 0.54 | 0.92 | 0.41 | 0.50 |
| 26 | YES | NO | 2,613 | 0 | NA | 45.0 | 0.59 | 0.90 | 0.49 | 0.61 |
| 27 | YES | NO | 7.961 | 0 | 20-82 | 4.7 | NA | 0.45 | NA | NA |
| 28 | YES | NO | 6,587 | 0 | 20-88 | 8.6 | NA | NA | 0.22 | 0.34 |
| 29 | NO | YES | 17,321 | 0 | X2=46 | 17-21 | 0.78 | 0.90 | NA | NA |
| 30 | NO | YES | 601 | 978 | 70-85+ | 5.0 | 0.44 | NA | NA | NA |
| 30 | NO | YES | 2222 | 0 | 70-85+ | 5.0 | 0.81 | 0.87 | NA | NA |
| 30 | NO | YES | 0 | 3679 | 70-85+ | 5.0 | 0.40 | 0.58 | NA | NA |
| 31 | NO | YES | 2264 | 2913 | 65-75+ | 6.0 | 0.45-0.77 | 0.96-1.21 | 0.22-1.06 | 1.05-1.26 |
| TOTAL | 9 | 20 | 129,658 | 29,933 | 20-85+ | 4.8-45 | 0.59* | 0.83* | 0.45* | 0.73* |

CF = Cardiovasular Fitness
PA = Physical Activity
N = Number of Subjects

NA = Not Available
HI = High Fitness or Activity Level
LOW= Low Fitness or Activity Level
F-UP= Follow-up Period

CHD = Coronary Heart Disease
CVD = Cardiovascular Disease
MOD = Moderate Fitness or Activity
* = Median Risk Ratio

and CVD/CHD mortality. In addition, several recent studies in which all-cause and CVD/CHD death rates were examined across low, moderate, and high levels of CF and PA in men and women with major risk factors for premature death (smoking, high cholesterol, hypertension, diabetes, family history) demonstrated lower mortality in the moderate and high compared to the low CF or PA groups.[19,33-35] Other recent studies have shown that moderate to high levels of CF or PA are associated with lower rates of new onset of CVD, hypertension, and non-insulin dependent diabetes mellitus.[36-39]

The mechanisms whereby PA or CF protects individuals from all-cause or CVD/CHD mortality remain unclear. Aerobic exercise has been found to increase HDL-cholesterol and Apoprotein A-1 while decreasing triglycerides, VLDL-cholesterol and LDL-cholesterol, enhance fibrinolysis by increasing tissue plasminogen activator and decreasing plasminogen activator inhibitor, decrease platelet aggregability, lower blood pressure, and, in combination with a low fat diet, to contribute to the prevention or reversal of the progression of coronary atherosclerosis.[40-45] Ani-

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mal studies suggested regular PA increases the ventricular threshold and decreases the extent of myocardial injury following artificially induced coronary occlusion.[46,47] In humans, studies have shown that prolonged exercise training enhances coronary vasodilator capacity and the functional reserve capacity of the heart.[48,49] Studies in post coronary patients participating in multifactorial cardiovascular rehabilitation programs have demonstrated a 25% reduction in all-cause and coronary mortality over 3-10 years.[50,51] Other investigations reported a lower incidence of complex ventricular dysrhythmias and decreased sympathetic activity in exercise trained versus untrained post coronary patients.[52,53]

Recent studies have reported lower mortality rates from site-specific cancers, particularly breast cancer and colorectal cancers, in physically active compared to sedentary individuals.[54,55] Acute physical exertion has been shown to increase the activity of enzymes that break down cancer-producing mutagens.[56] Chronic exercise has been found to favorably modify immune function in humans by increasing the number and activity of natural killer cells and improving the ratio of T to B cells.[57,58] In regards to colorectal cancer, physical activity was shown to increase gastrointestinal motility possibly through an increased secretion of prostaglandin.[59] Concerning reproductive cancers, exercise has been shown to be associated with lower rates of both breast and prostate cancers.[60,61] Vigorous exercise was found to be associated with a decreased output of reproductive hormones in women.[62] In men, lower levels of testosterone which are known to be higher in men with prostate cancer have been reported in distance runners versus sedentary controls.[63]

Although a low PA or CF clearly has been shown statistically to be an independent risk factor for all-cause and CVD/CHD mortality, the physiological mechanisms have not been clearly elucidated. This fact, however, does not preclude the importance of PA to overall health. In addition, two recent studies found that regular exercise, four or more days per week, protected individuals at risk for a heart attack following strenuous exertion.[64,65] Finally, a prospective trial of over 1900 men from Denmark found that it was regular PA and not CF per se which was associated with a reduction in all-cause and CVD/CHD mortality.[66]

Physical inactivity is the most prevalent CVD risk factor.[67] The Missouri Behavioral Risk Factor Surveillance System (BRFSS) study in 1990 found nearly 60% of Missourians were sedentary.[68] In 1989, the US Preventive Services Task Force gave exercise high marks not only for CVD prevention but also for the management of hypertension, diabetes, obesity, and mental health.[69] Both the recent National Cholesterol Education Program Adult Treatment Panel II and the Joint National Committee on the Detection, Evaluation, and Treatment of Hypertension, respectively, emphasized the role of physical activity in the management of these major risk factors for CVD.[70,71] These reports strongly recommended physicians counsel patients on increasing exercise levels.

The *Healthy Missourians 2000* goals call for increasing to 50% the proportion of Missouri adults who engage in regular aerobic exercise.[72] To increase the likelihood this will be achieved, another goal is to increase to at least 25% the proportion of sedentary adults who report being advised by their physician or other health professional to exercise more. In 1990, only 13% of physicians surveyed reported advising their patients to increase daily physical activity.[13] Other surveys also demonstrated physicians often do not consider physical inactivity a major risk factor for CVD/CHD.[9,73] Further, with the present critical need to reduce disease care costs, increasing exercise among patients should be a priority. This is emphasized by the fact that, when compared to other interventions for CVD prevention (e.g. hypertension and cholesterol screening), exercise is cost-effective.[74,75]

A majority of respondents in a recent survey indicated that they would exercise more if their physician recommended they should for a health reason.[76] A recent study demonstrated that patients given brief formal advice to increase their exercise level by their family physician reported increased duration of exercise per session and more favorable attitudes towards exercise.[77] Two additional controlled trials designed to increase exercise levels through community education and primary physician advice found increased rates in the intervention compared with controlled groups.[78,79] A retrospective study examining factors which increased the likelihood of elderly cardiac patients entering a comprehensive cardiovascular rehabilitation program found that the recommendation of the primary physician was the most important predictor of participation.[80]

At the community level, participation in walking groups or exercise classes can be enhanced by grassroots coalitions such as those in Missouri's Bootheel Heart Health Coalition.[81] Policy making bodies such as the Missouri Governor's Council on Physical Fitness and Sports can increase activities in physical activity promotion among governmental agencies, voluntary health agencies, and university-based specialists. Long-term minimal follow-up strategies to monitor progress have been shown to be essential to successful adoption of the exercise behavior.[82,83] This follow-up can be provided by scheduled repeat visits with allied health care professionals such as exercise physiologists, registered nurses, or registered dietitians for feedback on progress towards enhancing physical fitness, body composition, and CVD risk factors. One study also showed that long-term phone follow-up to reinforce the exercise habit is more effective in helping maintain weight loss than comparable support for maintenance of a low-fat diet.[84] A phone follow-up protocol can be easily incorporated into the policies and procedures of a comprehensive primary and secondary prevention program. In addition, several studies reported that participation in medically supervised programs enhanced the likelihood of patients adopting exercise as a habit and achieving the goal of risk factor modification.[45,85,86] Thus referral to a professional facility for guidance in exercise prescription, follow-up to support

**Figure 1 - Rating of Perceived Exertion RPE Scales**
(Borg GA. Med Sci in Sports and Exercise 1982;14:377-387)

| Category RPE Scale | | Category Ratio RPE Scale | |
|---|---|---|---|
| 6 | | 0 | nothing at all |
| 7 | very, very light | 0.5 | very, very weak |
| 8 | | 1 | very weak |
| 9 | very light | 2 | weak |
| 10 | | 3 | moderate |
| 11 | light | 4 | somewhat strong |
| 12 | | 5 | strong |
| 13 | somewhat hard | 6 | |
| 14 | | 7 | very strong |
| 15 | hard | 8 | |
| 16 | | 9 | |
| 17 | very hard | 10 | very, very strong |
| 18 | | ** | maximal |
| 19 | very, very hard | | |
| 20 | | | |

Maximal heart rate varies considerably (standard deviation of 12 BPM) among individuals during exercise testing. Therefore, it is helpful to be able to evaluate subjective ratings of the effort during exercise testing and training. This is especially important in patients who are taking medicaitions such as beta blockers which restrict the heart rate response to exercise. RPEs from the category (6-20 scale) scale correlate closely (0.80-0.90) with several physiological variables including percentage of peak oxygen uptake, percent heart rate reserve, minute ventilation, and blood lactate levels. The validity of the RPE scale is unaffected by beta blockade. RPEs in the range of 12-16 on the category scale or 3-5 on the category ratio scale represent the ventilatory or lactic acid threshold in most sedentary, apparently healthy adults. These subjective sensations approximate 60-85% of peak heart rate maximum in most healthy adults.

Ideally, patients should be exercise tested (maximally or submaximally depending on the CVD risk of the patient) and asked to use one of the RPE scales to describe the overall effort of each level of the test. If exercise is not possible, patients can be instructed to exercise at a level which is light to somewhat heavy (11-14). This can be described as a level of exercise that causes noticeable increased rate and depth of breathing and a feeling of warmth and noticeable perspiration but is comfortable enough that a conversation is possible and the level can be sustained with a reasonable degree of motivation. This is sometimes described as the "talk test." In most patients, if this level of exertion is sustained for 30-60 minutes, 3-7 days/wk, nearly optimal health benefits can be derived.

maintenance of the exercise behavior, and the provision of simple advice to exercise during routine patient examinations have been shown to be effective in modifying this major risk factor for CVD.

In Appendix 1, we provide recommendations and guidelines for aerobic exercise to enhance health and/or physical fitness. Appendix 2 contains information concerning professional association statements on exercise guidelines and on educational materials for patients and where they can be obtained.

In conclusion, the evidence is compelling that physical inactivity is a major risk factor for all-cause and CVD/CHD mortality. A recent report concluded that physical inactivity is the third most significant lifestyle risk factor for the nine leading causes of premature death.[1] On a population basis, prevalence of sedentary lifestyle is much greater than any other chronic disease risk factor.[87] In 1992, this information lead to an American Heart Association statement that sedentary lifestyle is a major risk factor for CVD comparable to hypercholesterolemia, hypertension, and cigarette smoking.[3] These findings, coupled with the evidence that physical activity favorably alters several other risk factors for chronic disease, make increasing exercise levels among our most important public health imperatives.

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## APPENDIX 1

## Guidelines for Aerobic Exercise to Enhance Health and Cardiovascular Fitness

1. Intensity should be moderate for most adults (between 40% and 85% of heart rate rate maximum).
2. Intensity should be based on the results of a maximal or submaximal exercise test if possible; if a patient is high risk by virtue of having two or more risk factors (male over 40 and post-menopausal women represent one risk factor), a comprehensive ECG, symptom, and blood pressure monitored exercise test should be administered prior to recommending the patient begin moderate to vigorous exercise.
3. The ACSM recommends apparently healthy adults can begin aerobic exercise at 40-60% of maximal oxygen uptake without a medical examination or exercise test as long as the exercise program proceeds gradually and the individual is alert to the development of unusual signs or symptoms (ACSM Guidelines, see Appendix 2).
4. The duration of exercise should be preferably 30 minutes.
5. Preferably this 30 minutes should be performed at one session per day; however, some health benefits can be obtained from three ten (10) or 2 (15) minute sessions per day.
6. Although some patients can be counseled and safely started on a moderate exercise program by their physicians, we suggest referral to an exercise specialist (ACSM or equivalent certification preferred) for submaximal exercise testing, assessment of body composition, discussion of barriers, attention to other factors related to adoption of the exercise habit, establishing a safe and effective exercise plan, to collect baseline data for assessment of progress on follow-up, and to identify any unique factors or problems which warrant special attention such as muscle imbalances or structural deformities which may preclude some modalities.
7. The patient can be instructed in the taking of pulse rate and the perceived exertion (Figure 1); eighty to ninety percent of patients can learn to monitor their intensity by this method; either the 0-10 or 6-20 scale may be used.
8. The emphasis should be on aerobic exercise but resistance training should be encouraged; initial instruction in resistance training by an Exercise Specialist is recommended; this should be done 2-3 times/week.
9. The initial session generally can be 15-20 minutes including warm-up and cool-down; each session should begin with a 5-7 minute warm-up during which the intensity is gradually increased to the target level; each session should end with a 5-7 minute cool-down (intensity is gradually decreased to within 20-25 bpm of pre-exercising heart-rate or until the effort is 10 or 2 or less the perceived exertion scales.
10. The frequency should be at least every-other day with 5-7 days per week being preferable (many exercise benefits such as lowering of triglycerides, blood pressure, blood glucose, body fat, and increasing endogenous TPA and HDL's appear to be dependent on the exercise stimulus being provided every 36-48 hours).
11. Recent data suggests benefits derived are dependent more on the total caloric output per session (a minimum of 300) and per week (a minimum of 1400) than the intensity; we recommend goals of: 1) 30 minutes per session not including the warm-up and cool-down, and 2) a range of 1400 to 2500 Kcal/wk or the equivalent of 12-25 miles walking or other aerobic exercise (2-5 hours per week).
12. Progression should emphasize shaping the exercise habit; a recommendation is for the patient to begin with 15-20 minutes every other day and progress by 20% each week (3-4 minutes/week). After achieving 30 minutes per session, the patient can then begin to do 1-2 shorter sessions per week; this should yield a weekly caloric expenditure of 1400-2500 Kcal/week in most patients.
13. These goals require a commitment a 2 to 5 hours per week; although this may seem substantial, studies show that over-weight individuals watch 2-4 hours of television per day; certainly, physicians and allied health care professionals can emphasize to patients that it is not unreasonable to forsake 30-60 minutes of television time to derive the health benefits of moderate to vigorous aerobic exercise (88,89).
14. Many patients ideally need the guidance of qualified professionals; therefore, we recommend a minimal 8 week period of supervised group exercise for most patients; however, educational materials on exercise are available from numerous sources; several of these resources and where they can be obtained are listed in Appendix 2.

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## The Authors

**Tom LaFontaine, PhD,** is the Clinical Exercise Physiologist, Director, at the Cardiovascular and Pulmonary Rehabilitation and the Cardiovascular Health Clinic of the Missouri Heart Institute at Boone Hospital Center, and the Vice-chair of the Missouri Cardiovascular Health Task Force. **Sue Dabney, MEd, MPH,** is the Program Coordinator for the Cardiovscular Health Project. **Ross Brownson, PhD,** is the Director, and **Carol Smith, MSPH,** is the Assistant Directorof the Division of Chronic Disease Prevention and Health Promotion at the Missouri Department of Health.

**Reprint requests to:**

**Tom LaFontaine, PhD**
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# Include Physicians in Reform Decisions

Craig Carmichael, MSMA Student Section Chairman

In the present mood of health care reform in the United States, suggestions for government considered plans have been presented by almost every group of people, except for one - the medical profession. Reform is on the horizon, but the result may be a crippled system that can no longer offer the best medical care in the world. Yet some of the brightest people in the United States have not been called upon to use their problem solving skills to tackle this monumental task: physicians. The administration seems to have put a priority on increasing the capacity to deliver primary care. However, few solutions have been offered. Different ideas need to be found to ensure a better solution to the health care problems. The present proposal seems to overlook the problems faced by physicians and patients. Many patients have problems and needs that are adequately treated only by a specialist. But at the same time this specialist is qualified to and often does give primary care to the patient during the same office visit.

The proposed system would force patients to visit both a primary care physician and a specialist, forcing an inherent double cost on the system, the patient and the taxpayer. In order to cut costs, the system might undertreat the patient's problems that require specialty attention until irreversible damage has been done (as has already happened in some situations). Then only "high-tech" and extremely expensive medical care can abate the damage. This increases death and suffering in a population without decreasing costs.

One possible alternative is to increase the incentives for primary care. This would increase the market force to provide primary care to the population without costly overregulation. Some of these types of incentives are already in place in some places, for instance compensating physicians for spending time with family of a hospitalized patient.

Another cause of unnecessary cost of the present system is the abuse of the emergency room. Many patients rely on the emergency room for health care. They often burn hundreds of dollars for an ambulance because of lack of taxi fare. Then they burn hundreds more being seen by an emergency room physician rather than using an office visit with a physician. Incentives could be enacted to dissuade patients from relying on emergency rooms and encouraging their use of regular office visits.

The proposed system calls for regulation of residencies such that many more physicians are committed to primary care. This reform only offers more primary care. It does not address the central problem of use. Many people lack initiative to see primary care and rely on treatment of problems rather than prevention. The attitudes of the population must be changed in order to augment the primary care given to the population. No matter how many physicians offer primary care, they will be useless if people don't keep appointments with them.

Another related problem is that many people only trust specialists for any care. They only seek medical care when a specific problem arises. Then they wish to discuss these problems with the appropriate specialist. Incentives for primary care would encourage the specialist to not only offer care for the specific problem, but also offer general health care to the person. Without neither encouraging people to obtain primary care from a physician or specialist nor encouraging physicians to offer primary care, any new system will not increase the practice of preventative medicine. The result of costly residency regulation will be a generation of disenchanted physicians forced into a field that they may not want to practice without any patients to see.

Many alternatives can only be imagined by personnel directly involved in administering health care. These ideas then can be refined by others into an improved health care system. However, the political orphanage of the medical professionals may cost the public the cooperation of this group as well as the loss of problem solving minds and innovative ideas. More openness from the administration towards medical personnel could go a long way to heal the woes of the current medical system. ■

**Correction: In the student article by Catherine Stocklin, *Of Times Ahead*, Feburary issue, Alfred Stille's statement was made in 1884 not 1984.**

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# NEW MEMBERS

**Elliot E. Abbey, MD,** Suite 16420, One Barnes Hospital Plaza, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Abbey received his medical degree at New York University, NY, in 1975. He completed his residency and fellowship at Barnes Hospital. Dr. Abbey specializes in hematology.

**Arie Ashkenasi, MD,** 1000 E. Primrose, Suite 310, Springfield, MO 65807, has become a member of the Greene County Medical Society. Dr. Ashkenasi received his medical degree at Tel Aviv University, Sackler FAC of Medicine, in 1978. He completed a fellowship at the University of Alabama. Dr. Ashkenasi specializes in pediatric neurology.

**Peggy W. Barjenbruch, MD,** 809 Medical Park Dr., Mexico, MO 65265, has become a member of the Audrain County Medical Society. Dr. Barjenbruch received her medical degree at the University of Missouri-Kansas City in 1982. She completed her residency at the University of Missouri-Columbia. Dr. Barjenbruch specializes in internal medicine.

**Thomas V. Batty, MD,** 808 South Main St., Eldorado Springs, MO 64744, has become a member of the West Central Medical Society. Dr. Batty received his medical degree at Case Western Reserve University, Cleveland, OH, in 1954. He completed an internship at Truman Medical Center. Dr. Batty specializes in family practice.

**Patricia G. Corder, MD,** 13062 Starbuck Rd., St. Louis, MO 63141, has become a member of the Missouri State Medical Association. Dr. Corder received her medical degree at St. Louis University in 1982. She completed her residency at St. Louis University Hospital and fellowship at the Mallinckrodt Institute of Radiology. Dr. Corder specializes in diagnostic radiology.

**Melinda A. Crockett-Maples, MD,** 1900 S. National, Suite 2200, Springfield, MO 65804, has become a member of the Greene County Medical Society. Dr. Crockett-Maples received her medical degree at the University of Missouri-Kansas City in 1990. She completed her residency at the University of Kansas Medical Center. Dr. Crockett-Maples specializes in internal medicine.

**Terry J. Elwing, MD,** 1 Hospital Drive, Columbia, MO 65212, has become a member of the Boone County Medical Society. Dr. Elwing received his medical degree at the University of Missouri-Columbia in 1989. He completed his residency at the University of Missouri-Columbia. Dr. Elwing specializes in radiology.

**Curtis C. Evenson, MD,** 1900 National, Springfield, MO 65804, has become a member of the Greene County Medical Society. Dr. Evenson received his medical degree at the University of Kansas in 1986. He completed his residency at the University of Kansas. Dr. Evenson specializes in anesthesiology.

**David L. Geier, MD,** 3231 S. National, Springfield, MO 65807, has become a member of the Greene County Medical Society. Dr. Geier received his medical degree at the University of Kansas in 1988. He completed his residency and fellowship at the University of Kansas. Dr. Geier specializes in internal medicine.

**Sanjay Ghosh, MD,** 617 Franklin St., Washington, MO 63090, has become a member of the Missouri State Medical Association. Dr. Ghosh received his medical degree at St. Louis University in 1988. He completed his residency and fellowship at St. Louis University. Dr. Ghosh specializes in rheumatology.

**Frances A. Hedrick, MD,** 165 W. Simon Blvd., Holts Summit, MO 65043, has become a member of the Cole County Medical Society. Dr. Hedrick received his medical degree at the University of Colorado in 1984. He completed his residency at the University of Missouri-Columbia. Dr. Hedrick specializes in family practice.

**Luciann L. Hruza, MD,** 1040 N. Mason Rd., Suite 120, St. Louis, MO 63141, has become a member of the Missouri State Medical Association. Dr. Hruza received his medical degree at Boston University in 1988. He completed his residency at Washington University. Dr. Hruza specializes in dermatology.

**Robert W. Hyatt, MD,** 1432 Southwest Blvd., Jefferson City, MO 65110-4420, has become a member of the Cole County Medical Society. Dr. Hyatt received his medical degree at the University of Missouri-Columbia in 1972. He completed his residency at the University of Missouri-Columbia and fellowship at USC Children's Hospital of Los Angeles, CA. Dr. Hyatt specializes in internal medicine.

**James A. King, MD,** 1023 Tidewater Pl., St. Louis, MO 63017, has become a member of the Missouri State Medical Association. Dr. Tidewater received his medical degree at Indiana University, Indianapolis, in 1982. He completed his residency at Indiana University. Dr. King specializes in anesthesiology.

Continued on page 199

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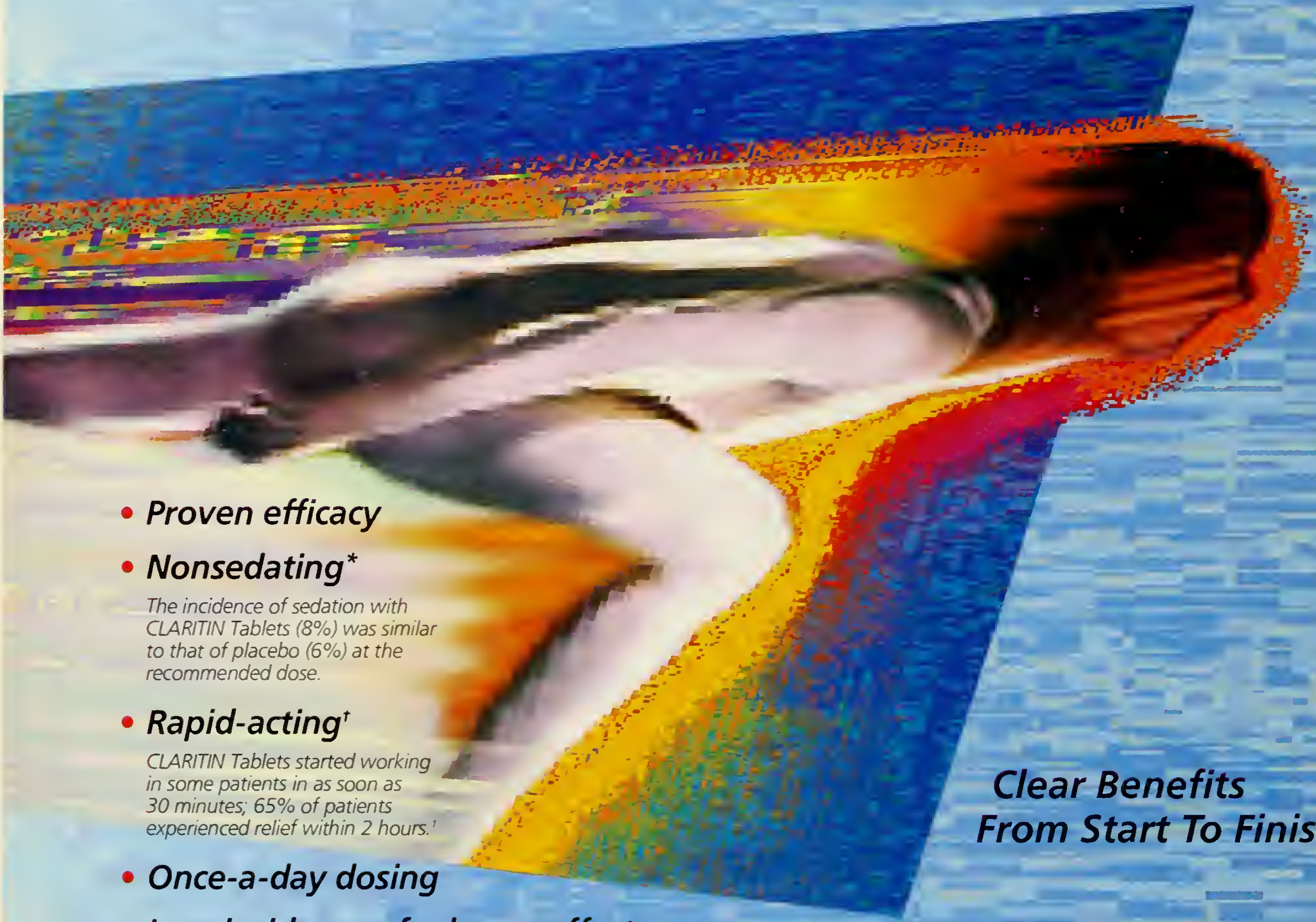

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* In studies with CLARITIN Tablets at doses 2 to 4 times higher than the recommended dose of 10 mg, a dose-related increase in the incidence of somnolence was observed.

† Relief began in 13% of treated patients vs 4% of placebo-treated patients within 30 minutes (P=.04). At 2 hours, 48% of patients receiving placebo experienced relief. Distribution of onset times was significantly earlier for CLARITIN Tablets vs placebo (P=.03).

Please see following page for brief summary of Prescribing Information.

**CLARITIN®**
**brand of loratadine**
**TABLETS**
**Long-Acting Antihistamine**

**BRIEF SUMMARY**
(For full Prescribing Information, see package insert.)

**INDICATIONS AND USAGE**
CLARITIN Tablets are indicated for the relief of nasal and non-nasal symptoms of seasonal allergic rhinitis

**CONTRAINDICATIONS**
CLARITIN Tablets are contraindicated in patients who are hypersensitive to this medication or to any of its ingredients

**PRECAUTIONS**
**General:** Patients with liver impairment should be given a lower initial dose (10 mg every other day) because they have reduced clearance of CLARITIN Tablets

**Drug Interactions:** The coadministration of a single 20 mg dose of CLARITIN Tablets (double the recommended daily dose) and a 200 mg dose of ketoconazole twice daily to 12 subjects resulted in increased plasma concentrations of loratadine (180% increase in AUC) and its active metabolite, descarboethoxyloratadine (56% increase in AUC) However, no related changes were noted in the QTc on ECGs taken at 2, 6, and 24 hours after the coadministration of loratadine and ketoconazole Also, there were no significant differences in clinical adverse events between CLARITIN Tablet groups with or without ketoconazole

Other drugs known to inhibit hepatic metabolism should be coadministered with caution until definitive interaction studies can be completed The number of subjects who concomitantly received macrolide antibiotics, cimetidine, ranitidine, or theophylline along with CLARITIN Tablets in controlled clinical trials is too small to rule out possible drug-drug interactions There does not appear to be an increase in adverse events in subjects who received oral contraceptives and CLARITIN Tablets compared to placebo

**Carcinogenesis, Mutagenesis, and Impairment of Fertility:** In an 18-month oncogenicity study in mice and a 2-year study in rats, loratadine was administered in the diet at doses up to 40 mg/kg (mice) and 25 mg/kg (rats). In the carcinogenicity studies, pharmacokinetic assessments were carried out to determine animal exposure to the drug AUC data demonstrated that the exposure of mice given 40 mg/kg of loratadine was 3.6 (loratadine) and 18 (active metabolite) times higher than a human given 10 mg/day Exposure of rats given 25 mg/kg of loratadine was 28 (loratadine) and 67 (active metabolite) times higher than a human given 10 mg/day Male mice given 40 mg/kg had a significantly higher incidence of hepatocellular tumors (combined adenomas and carcinomas) than concurrent controls In rats, a significantly higher incidence of hepatocellular tumors (combined adenomas and carcinomas) was observed in males given 10 mg/kg and males and females given 25 mg/kg The clinical significance of these findings during long-term use of CLARITIN Tablets is not known

In mutagenicity studies, there was no evidence of mutagenic potential in reverse (AMES) or forward point mutation (CHO-HGPRT) assays, or in the assay for DNA damage (Rat Primary Hepatocyte Unscheduled DNA Assay) or in two assays for chromosomal aberrations (Human Peripheral Blood Lymphocyte Clastogenesis Assay and the Mouse Bone Marrow Erythrocyte Micronucleus Assay) In the Mouse Lymphoma Assay a positive finding occurred in the nonactivated but not the activated phase of the study

Loratadine administration produced hepatic microsomal enzyme induction in the mouse at 40 mg/kg and rat at 25 mg/kg, but not at lower doses

Decreased fertility in male rats, shown by lower female conception rates, occurred at approximately 64 mg/kg and was reversible with cessation of dosing Loratadine had no effect on male or female fertility or reproduction in the rat at doses of approximately 24 mg/kg

**Pregnancy Category B** There was no evidence of animal teratogenicity in studies performed in rats and rabbits There are, however, no adequate and well-controlled studies in pregnant women Because animal reproduction studies are not always predictive of human response, CLARITIN Tablets should be used during pregnancy only if clearly needed

**Nursing Mothers:** Loratadine and its metabolite, descarboethoxyloratadine, pass easily into breast milk and achieve concentrations that are equivalent to plasma levels with an AUC$_{milk}$/AUC$_{plasma}$ ratio of 1.17 and 0.85 for the parent and active metabolite, respectively Following a single oral dose of 40 mg, a small amount of loratadine and metabolite was excreted into the breast milk (approximately 0.03% of 40 mg over 48 hours). A decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother Caution should be exercised when CLARITIN Tablets are administered to a nursing woman.

**Pediatric Use:** Safety and effectiveness in children below the age of 12 years have not been established

**ADVERSE REACTIONS**
Approximately 90,000 patients received CLARITIN Tablets 10 mg once daily in controlled and uncontrolled studies Placebo-controlled clinical trials at the recommended dose of 10 mg once a day varied from 2 weeks' to 6 months' duration The rate of premature withdrawal from these trials was approximately 2% in both the treated and placebo groups

REPORTED ADVERSE EVENTS WITH AN INCIDENCE OF MORE THAN 2% IN
PLACEBO-CONTROLLED ALLERGIC RHINITIS CLINICAL TRIALS
PERCENT OF PATIENTS REPORTING

| | **LORATADINE** 10 mg QD n = 1926 | **PLACEBO** n = 2545 | **CLEMASTINE** 1 mg BID n = 536 | **TERFENADINE** 60 mg BID n = 684 |
|---|---|---|---|---|
| Headache | 12 | 11 | 8 | 8 |
| Somnolence | 8 | 6 | 22 | 9 |
| Fatigue | 4 | 3 | 10 | 2 |
| Dry Mouth | 3 | 2 | 4 | 3 |

Adverse event rates did not appear to differ significantly based on age sex, or race, although the number of non-white subjects was relatively small

In addition to those adverse events reported above, the following adverse events have been reported in 2% or fewer patients
*Autonomic Nervous System* Altered salivation, increased sweating altered lacrimation, hypoesthesia, impotence thirst, flushing
*Body As A Whole* Conjunctivitis, blurred vision, earache, eye pain, tinnitus, asthenia, weight gain, back pain, leg cramps, malaise, chest pain, rigors, fever aggravated allergy, upper respiratory infection, angioneurotic edema
*Cardiovascular System* Hypotension, hypertension, palpitations, syncope tachycardia
*Central and Peripheral Nervous System* Hyperkinesia, blepharospasm, paresthesia dizziness, migraine tremor vertigo, dysphonia
*Gastrointestinal System* Abdominal distress, nausea vomiting, flatulence, gastritis, constipation diarrhea altered taste, increased appetite, anorexia, dyspepsia, stomatitis, toothache
*Musculoskeletal System* Arthralgia, myalgia
*Psychiatric* Anxiety, depression, agitation, insomnia paroniria, amnesia, impaired concentration, confusion, decreased libido, nervousness
*Reproductive System* Breast pain, menorrhagia, dysmenorrhea, vaginitis
*Respiratory System* Nasal dryness, epistaxis, pharyngitis, dyspnea, nasal congestion coughing, rhinitis hemoptysis sinusitis, sneezing, bronchospasm, bronchitis, laryngitis
*Skin and Appendages* Dermatitis, dry hair, dry skin, urticaria, rash, pruritus, photosensitivity reaction, purpura
*Urinary System* Urinary discoloration, altered micturition

In addition, the following spontaneous adverse events have been reported rarely during the marketing of loratadine peripheral edema, abnormal hepatic function, including jaundice, hepatitis, and hepatic necrosis, alopecia, seizures, breast enlargement, erythema multiforme, and anaphylaxis

**OVERDOSAGE**
Somnolence, tachycardia, and headache have been reported with overdoses greater than 10 mg (40 to 180 mg) In the event of overdosage general symptomatic and supportive measures should be instituted promptly and maintained for as long as necessary

Treatment of overdosage would reasonably consist of emesis (ipecac syrup) except in patients with impaired consciousness, followed by the administration of activated charcoal to absorb any remaining drug If vomiting is unsuccessful, or contraindicated, gastric lavage should be performed with normal saline Saline cathartics may also be of value for rapid dilution of bowel contents Loratadine is not eliminated by hemodialysis It is not known if loratadine is eliminated by peritoneal dialysis

Oral LD$_{50}$ values for loratadine were greater than 5000 mg/kg in rats and mice Doses as high as 10 times the recommended clinical doses showed no effects in rats mice, and monkeys

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*Reference*
*1. Bédard P-M, Del Carpio J, Drouin MA, et al. Onset of action of loratadine and placebo and other efficacy variables in patients with seasonal allergic rhinitis.*
*Clin Ther. 1992;14:268-275.*

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Continued from page 198

**Daniel P. Lavery, MD,** 221 S. Moreau, Tipton, MO 65801, has become a member of the Cole County Medical Society. Dr. Lavery received his medical degree at the University of Missouri-Columbia in 1988. He completed his residency at Baptist Medical Center, Kansas City. Dr. Lavery specializes in family practice.

**Peter R. Marcellus, MD,** 203 E. 9th, Suite D, Trenton, MO 64683, has become a member of the Grand River Medical Society. Dr. Marcellus received his medical degree at he University of Iowa in 1975. He completed his residency at Broadlawns Medical Center, Des Moines, IA. Dr. Marcellus specializes in family practice.

**Jan F. Onik, DO,** 211 S. Third, Louisiana, MO 63353, has become a member of the Northeast Missouri Medical Society. Dr. Onik received his doctor of osteopathy at Kirksville College of Osteopathic Medicine in 1981. He completed his residency at Charles Still Osteopathic Hospital, Jefferson City. Dr. Onik specializes family practice.

**Thomas W. Schneider, MD,** 1505 Southwest Blvd., Jefferson City, MO 65109, has become a member of the Cole County Medical Society. Dr. Schneider received his medical degree at the University of Iowa in 1981. He completed his residency and fellowship at the University of Missouri-Columbia. Dr. Schneider specializes in internal medicine.

**Paparao Tatini, MD,** 12114 Country Manor Ln., St. Louis, MO 63141, has become a member of the Missouri State Medical Association. Dr. Tatini received his medical degree at Andhra Medical College, Andhra University, Visakhapatnam, India, in 1969. He completed his residency at Miami Valley Hospital, Dayton, OH. Dr. Tatini specializes in anesthesiology.

**Mary Kay Tuohy, MD,** 7830 State Line Rd., Prairie Village, KS 66208, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Tuohy received her medical degree at the University of Minnesota, Minneapolis, in 1988. She completed her residency at the University of Minnesota. Dr. Tuohy specializes in family practice.

## RESIDENTS

Igor Brondz, MD - *Internal Medicine*
Maria E. Schmidt, MD - *Diagnostic Radiology*

## STUDENTS

*University of Missouri-Kansas City*
Elizabeth M. Lohman

# MEDICAL SCHOOL NEWS

## University of Missouri-Columbia

MU Health Sciences Center has affiliated with the Kirksville Osteopathic Medical Center (KOMC) and the Kirksville College of Osteopathic Medicine (KCOM). The agreement highlights a 10-year effort to develop a vertical health care delivery model for north central and northeast Missouri. Objectives include developing a cooperative rural family practice residency program that will give KOMC's residents more tertiary-care training opportunities and MU's residents additional rural training opportunities; developing combined recruitment strategies for subspecialists and other medical services; expanding KCOM's current AHECs in northeast and southeast Missouri and creating a central Missouri AHEC; providing a full-service, seamless structure of health care to meet current and future needs for citizens of Missouri; developing relationships for expanded teaching appointments in support of educational needs at both medical schools; and developing an integrated health care delivery system that will position both institutions for health care reform at the state and national levels.

**Michael C. Perry, MD,** is the new director of the school's division of hematology and oncology and the first person to hold the Nellie B. Smith Chair in Oncology. Mrs. Smith of Slater, Mo., died in 1992 and willed much of her estate to the Ellis Fischel Cancer Center before it merged with MU Health Sciences Center. Dr. Perry joined MU's division of hematology and oncology in 1975. In 1983 he was appointed chairman of internal medicine. He became the school's senior associate dean in 1991. Since 1972, Dr. Perry has conducted cancer research as a member of the National Cancer Institute's Cancer and Leukemia Group B. In 1990 he discovered a new type of hemoglobin the he named "Hemoglobin Columbia Missouri." In 1991 his book, *The Chemotherapy Source Book*, was published and has become a standard reference on the subject.

**Jack Colwill, MD,** professor and chairman of family and community medicine has testified before two US Senate Committees. He presented the Fourth Report of the Council on Graduate Medical Education to the Committee on Labor and Human Resources. The report, designed to bring the physician work force in line with national needs in the 21st century, recommends a process to reduce the total number of residency positions funded by the government to 10% above the number of graduates. It also provides a means to have half of all residency graduates practice as generalists. Dr. Colwill was appointed to COGME by the U.S. Secretary of Health and Human Services in 1990. He chaired the council subcommittee that prepared the report. On March 8 he testified before the Senate Finance Committee on COGME's recommendations to improve health care access, cost and quality through physician work force reform.

## St. Louis University

The following member physicians were listed in *The Best Doctors in America*, a directory listing slightly more than 2% of the nation's 350,000 practicing physicians: Thomas Aceto, Jr., MD; Andrew R. Baldassare, MD; Goronwy O. Broun, Jr., MD; Paul A. Dewald, MD; George T. Grossberg, MD; Donald P. Hay, MD; John B. Holds, MD; Michael D. Maves, MD; Robert W. Meyers, MD; D. Glenn Pennington, MD; Roy H. Petrie, MD, ScD; David J. Schanzlin, MD; John B. Selhorst, MD; Gary Spitzer, MD; and, Anthony M. Vernava, III, MD.

The book was compiled by asking physicians throughout the nation to recommend a specialist to whom they would send a relative or friend if they needed care.

## Washington University

**David B. Clifford, MD,** associate professor of neurology, received a two-year grant from the National Institute of Neurological Disorders and Stroke, for a research project titled, "Neurologic Aids Research Consortium."

**Joel S. Perlmutter, MD,** associate professor of neurology and radiology received a three-year grant from the National Institute of Neurological Disorders and Stroke for a research project titled, "Neuroimaging of Parkinsonism."

**Mary L. Vest,** Vice Chair of the MSMA Student Section and AMA Alternate Delegate, was one of 50 outstanding young medical professionals honored by the American Medical Association at its annual National Leadership Conference. The AMA/Glaxo Achievement Awards were presented to 25 medical students and 25 residents in recognition of their exceptional leadership abilities in medicine and achievements in non-clinical community activities. Her involvement in health policy activities led to her appointment as a health care research fellow for Senator John Danforth in 1993. She is currently organizing chapter activities such as a speaker's series, state lobby day, and a state-wide letter writing campaign.

The American Board of Plastic Surgery, Inc., has announced that **Raymond Mossie, MD,** a specialist in plastic surgery in Gladstone, Mo., has successfully completed the examination for certification of added qualifications in surgery of the hand.

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# CME CALENDAR

**The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send CME information for listing in *MISSOURI MEDICINE*. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.**

## April

**7 to 10 - *Kansas City*: The 136th Annual Convention of the Missouri State Medical Association.** Scientific sessions covering over 20 specialities. Contact MSMA, 314/636-5151.

**7 to 9 - *St. Joseph*: St. Joseph Cardiac and Critical Care Conference.** 25 credit hours. Drs. Early & Roberts, 816/233-8033.

**8 - *Philadelphia, PA*: Frontiers in Ovulation Induction.** Washington University 314/362-6893, 800/325-9862 interstate.

**8 to 10 - *Tan-Tar-A, Osage Beach, MO*: Mental Health & Aging: Anxiety & The Older Adult.** 12.5 credit hours. Contact Jane Colt, St. Louis University, 577-8726.

**9 & 10 - *Chicago, IL*: National Kidney Foundation Third Annual Spring Clinical Nephrology Meetings, Primary Care Nephrology Program.** 10 credit hours. Call 1-800-622-9010.

**9 to 11 - *Washington D.C.*: Workshop on Stress Echocardiography.** 13 credit hours. Contact Beth M. Paul, St. Luke's Hospital of K.C., 816/932-2301, fax 816/932-5119.

**11 - *St. Louis*: City-Wide Radiology Conference, St. Louis University.** Contact R. Gilbert Jost, MD, Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 314/362-7130.

**11 & 12 - *St. Louis*: Couple & Commitment: Infidelity and the Betrayal of Intimacy.** 10 credit hours. Contact St. John's Mercy Medical Center, 314/569-6290.

**15 - *Kansas City*: Infectious Disease 1994.** 4.5 credit hours. The Ed Bixby Institute, 816/276-4306, 800/892-5771 ext. 4306 in MO, 800/821-5140 ext. 4306 for bordering states.

**16 - *St. Louis*: Hemostasis in Cardio-Pulmonary Surgery.** Washington University, 314/362-6893, 800/325-9862 interstate.

**19 - *Kansas City*: Perinatal Core Curriculum Workshop #7.** 5 credit hrs. Carol Osborne, St. Luke's Hospital of KC, 816/932-3737.

**20 - *St. Louis*: Update in Psychiatry: Medical Marriages, They Do Work.** 3.25 credit hours. St. John's Mercy Medical Center, 314/569-6290.

**21 & 22 - *St. Louis*: 26th Annual Matt Weis Symposium.** 11 credit hours. St. John's Mercy Medical Center, 314/569-6290.

**21 to 24 - *St. Louis*: Advanced Microsurgery of the Lumbar and Cervical Spine.** 28 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**23 - *St. Louis*: Recent Advances in Infectious Diseases.** Washington University 314/362-6893; 800/325-9862 interstate.

**23 - *St. Louis*: Treating Difficult Patients in Group.** 6.5 credit hours. Contact St. John's Mercy Medical Center, 314/569-6290.

**25 to 29 - *St. Louis*: The Medicolegal Death Investigator Training Course.** 33 credit hours. Mary Fran Ernst, St. Louis University, 314/522-6410, ext. 6509.

**26 to 28 - *St. Louis*: Color-Flow Doppler Echocardiography.** 20 credit hours. Dianne Reid, St. Louis University, 314/577-8897.

**28 & 29 - *Overland Park, KS:* Current Management In Critical Care.** Contact Linda Smutz, KC Southwest Clinical Society, 816/523-3383.

**29 - *St. Louis*: Oculoplastic and Facial Plastic Surgery Workshop.** 8 credit hrs. Dr. Kerry Assil, St. Louis University, 314/865-8333.

**29 - *Springfield*: First Southwest Missouri Medical Direction Conference.** 4.5 credit hrs. Cox Educational Services, 417/885-4117.

**29 - *Springfield*: Geriatric Medicine Symposium: A Team Approach.** 10.3 credit hrs. Cox Educational Services, 417/885-4117.

**30 - *St. Louis*: Anxiety and Depression.** Washington University 314/362-6893, 800/325-9862 interstate, fax 314/362-1087.

## May

**2 - *St. Louis*: City-Wide Radiology Conference: Peter Mueller, MD - Interventional Radiology.** Dr. R. Gilbert Jost, Mallinckrodt Institute of Radiology, 314/362-7130.

**5 - *Springfield*: "Do No Harm" Whose Life is it Anyway...The Ethical Challenge of a New Millennium.** 5 credit hours. Call 417/836-6660.

**6 to 8 - *St. Petersburg, FL*: Physicians' Liability Issues.** 11 credit hours. St. Louis University, 314/577-8167; 800/553-2712.

**7 - *St. Louis*: 5th Annual Current Guidelines for Office Management of Patients with Cardiovascular Disease.** 3 credit hours. St. Louis University, 314/577-8167; 800/553-2712.

**7 - *St. Louis*: Sleep Disorders for the Primary Care Physician.** Washington University 314/362-6893, 800/325-9862 interstate.

**9 to 11 - *St. Louis*: Spinal Fracture Fixation, Part I: Cervical Spine.** 20 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**11 to 13 - *Kansas City*: A Teaching Course in Coronary Angioplasty and New Interventional Devices.** 20 credit hours. Beth M. Paul, St. Luke's Hospital, 816/932-2301 or 816/932-5119.

**12 to 14 - *St. Louis*: Spinal Fracture Fixation, Part II: Thoracolumbar Spine.** 20 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**12 to 14 - *St. Louis*: WUMCAA Reunion.** Washington University 314/362-6893, 800/325-9862 interstate, fax 314/362-1087.

**13 - *Kansas City*: Practical Cardiology.** 5.5 credit hours. The Ed Bixby Institute, in MO: 800/892-5771, ext. 4306; bordering states: 800/821-5140, ext. 4306.

**14 - *Kansas City*: Current Concepts in Women's Health Issues.** 6 credit hours. Call Kim Dwork, St. Luke's Hospital, 816/932-3737 or 816/932-5119.

**17 & 18 - *St. Louis:* Transesophageal Echocardiography.** 13 credit hours. Dianne Reid, St. Louis University, 314/577-8897.

**18 - *St. Louis*: Update in Thoracic Surgery.** Contact Washington University 314/362-6893, 800/325-9862 interstate.

**19 to 21 - *St. Louis:* Craniofacial Surgery.** Contact St. Louis University, 314/577-8167 or 800/553-2712.

**20 & 21 - *St. Louis*: Contemporary Topics in Cardiothoracic Anesthesia.** Washington University 314/362-6893, 800/325-9862 interstate, fax 314/362-1087.

**20 & 21 - *Kansas City*: Pediatric Radiation Oncology Conference.** 10 credit hours. Carol Osborne, St. Luke's Hospital, 816/932-3737 or 816/932-5119.

**21 - *St. Louis:* Controversies in Contemporary Imaging.** Washington University 314/362-6893, 800/325-9862 interstate.

**23 to 28 - *St. Louis:* Health Care Ethics in a Pluralistic Society** 34 credit hours. Mrs. Donna G. Troy, St. Louis University, 314/577-8195.

# PHYSICIAN RECOGNITION AWARDS

**The Physician Recognition Award is presented by the Missouri State Medical Association and the American Medical Association to physicians who voluntarily complete 150 hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.**

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In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: **"In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA."** We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

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### References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for the reference accuracy.

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**References:**

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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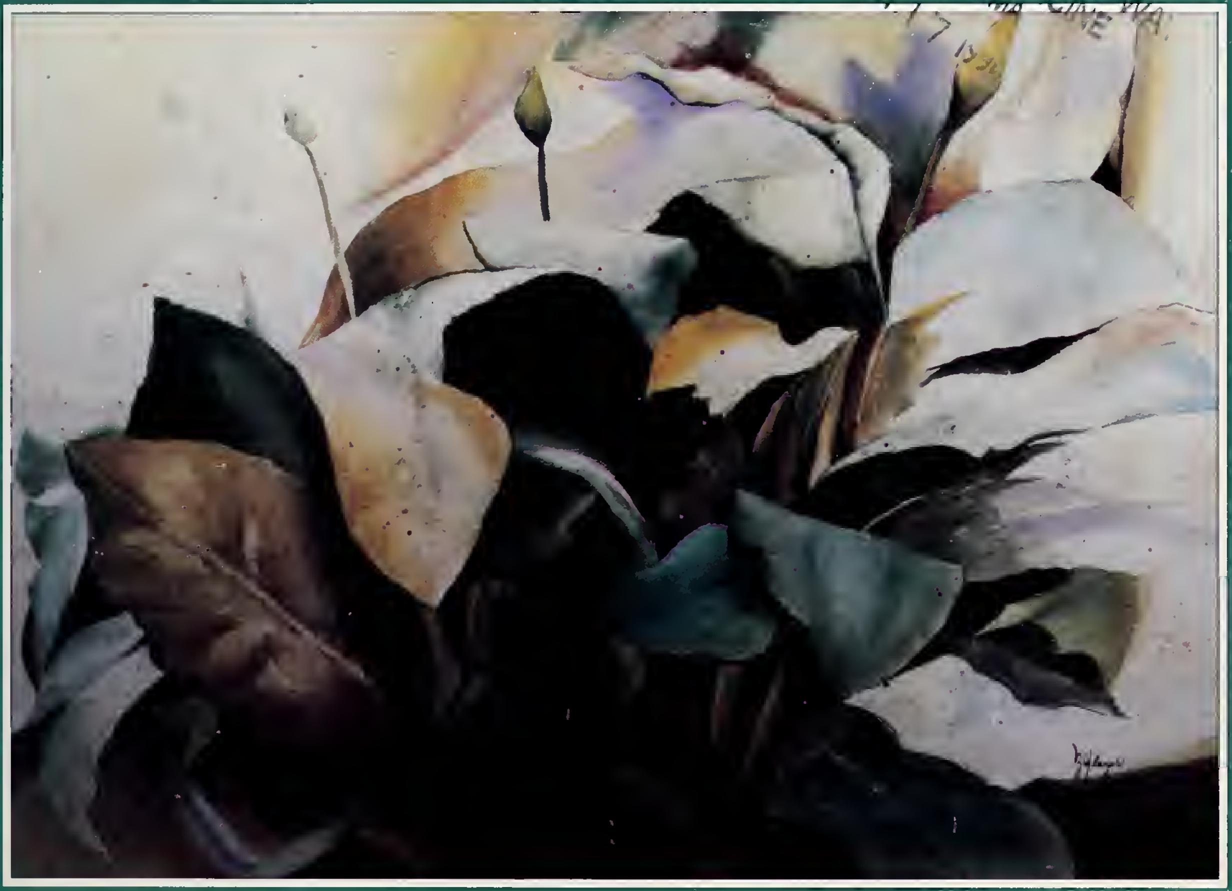

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MISSOURI MEDICINE

VOLUME 91, NUMBER 5

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**MISSOURI STATE MEDICAL ASSOCIATION**
Box 1028, 113 Madison Street
Jefferson City, MO 65102
Phone: 314/636-5151
Fax: 314/636-8552
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Owned and edited since 1904 by the Missouri State Medical Association. Missouri Medicine, Journal of the Missouri State Medical Association, [ISSN 0026-6620] is published monthly at 113 Madison, Jefferson City, Missouri 65102. Second-Class postage paid at Jefferson City, Missouri and at additional mailing offices. **Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.**

The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the cost os a copy of the annual August Directory is $15.00.

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# Missouri State Medical Association

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**Zelda Glazer is an avid plant and flower enthusiast who spends a lot of the spring, summer and autumn months in nurseries and greenhouses. This plant was just beginning to bloom one spring at Shaw's Garden.**

### MSMA Directory

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# Keeping Our House in Order

J. Regan Thomas, MD, Editor

**Approximately 1% of physicians will be recognized annually as suffering from impairment related to alcohol or substance abuse and dependency.**

With all the discussion about "health care delivery" and "health system reform" requiring our attention, we must not forget to keep our own house in order. Concern for the impaired physician requires dedicated and knowledgeable programs to identify and council these individuals. Effective treatment only comes when the problem is actively detected and resources for offsetting the problem are made available.

Failure to identify the impaired physician puts the public at risk and can not be tolerated in our community. In addition, though this problem represents only a tiny number of physicians, the repercussions of their actions may create inordinate damage to the stature, reputation and credibility of the profession. Approximately 1 % of physicians annually will be recognized as suffering from impairment related to alcohol or substance abuse and dependency.

In this issue George Bohigian, MD, and his colleagues present the first of a two-part series examining the impaired physician. This month's article is titled "Substance Abuse and Dependence In Physicians: An overview of the effects of alcohol and drug abuse." Dr. Bohigian discusses the definitions and steps to recognition related to substance abuse. He also examines appropriate intervention and treatment which may help return these physicians to a healthy personal and professional life. The following issue will publish Dr. Bohigian's examination of the Missouri State Physicians Health Program's experience in dealing with the impaired physician. Dr. Bohigian and his colleagues identify some truly interesting statistics about impairment by specialty, geographic location, professional status and more. Importantly they identify steps that all of us can take to help a physician in need.

I have chosen to highlight these papers in *Missouri Medicine* because of the extreme importance to our profession and to our patients. We are in a period when there are so many distractions to the practice of medicine competing for our energies and time. Nevertheless, we must not allow other key issues to go without being addressed. Please read these articles carefully. Denial is discussed as a hallmark of the disease. Denial and rationalization make it unlikely for self-recognition (and certainly self-reporting) to occur. It is incumbent, therefore, for all of us to accept the responsibility to be aware of the danger signs and initiate appropriate steps for intervention when recognized. I applaud the authors Bohigian, Croughan and Saunders, for their concise, practical, and timely discussion. ■

**NOTE: In Dr. Thomas' article, "The Children: Still at Risk" in the April issue of *Missouri Medicine*, it was stated that 40% of Sudden Infant Death Syndrome deaths were actually related to abuse or neglect. The correct percentage is 4.7%.**

# H. Jerry Murrell, MD MSMA President, 1994-1995

H. Jerry Murrell, MD

H. Jerry Murrell, MD, was inaugurated the 136th President of the Missouri State Medical Association, April 9, at the Annual Meeting in Kansas City, Missouri.

Dr. Murrell was born and raised in Texas. He received his medical degree from the University of Texas in 1962. Following an internship at the Sacramento County Hospital, he served on active duty with the U.S. Navy until 1965. He completed a family practice residency at the Sonoma County Hospital in California, and a radiology residency the Mallinckrodt Institute of Radiology/Washington University. He was in private practice in Albuquerque, New Mexico, and academic practice at the Arizona Health Sciences Center in Tucson, Arizona, before moving to Columbia in 1984.

Dr. Murrell directs the radiation oncology service at Boone Hospital Center in Columbia and the Mid-Missouri Medical Foundation in Jefferson City, as well as being co-director of radiation oncology department at the University of Missouri-Columbia School of Medicine.

Dr. Murrell joined the Boone County Medical Society in 1984. He was the MSMA Councilor from District V from 1985 to 1993, and has been Chairman of the MSMA Legislative Committee since 1989. Dr. Murrell is also a Delegate to the Medical School Section of the AMA for the University of Missouri-Columbia. He is a member of the American College of Radiology and Oncology, the American College of Radiology, and the Missouri Society of Radiology. He is past president of the New Mexico Society of Radiology and has served on the Steering Committee of the American College of Radiology.

Dr. Murrell is married to Beverly Robertson, MD. They have three children who reside in Columbia. He is a dedicated fly fisherman and enjoys tennis, bridge, and playing the piano.

As Dr. Murrell assumes the presidency, he asks for the continued support and involvement of all MSMA members and urges physicians to push hospitals, insurance companies and integrated networks into recognizing the benefits of physician partnership in the decision making process. "We must monitor legislation carefully and remain ever vigilant in order to preserve our role as partners. We must speak with one voice - strong, clear, decisive," he said during his inaugural address.

***"We must monitor legislation carefully and remain ever vigilant in order to preserve our role as partners. We must speak with one voice - strong, clear, decisive."***

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Jean Wankum

# Jean Wankum Alliance President, 1994-1995

*"We all know that economics plays a part in health reform and our practices but it is not at the heart of why we are in medicine. We must not remain alone in our struggle as medicine is redefined, but together share ideas, serve our patients, educate each other and our communities and most of all continue our friendships."*

Jean Wankum was inaugurated the president of the Missouri State Medical Association Alliance for 1994-1995, at the Annual Meeting, April 9, in Kansas City, Missouri.

Jean received her bachelor of science degree in nursing from St. Louis University in 1969. She worked as a public health nursing consultant and instructor of pediatrics for the University of Missouri Medical Center prior to working with her husband, Robert P. Wankum, MD, for 17 years at their practice, Jefferson City Eye Consultants.

Jean was elected president of the Cole County Medical Society Alliance in 1986. At the state level, she has served as Vice President for Health Promotion, Recording Secretary, Vice President for Legislation, AMPAC-MMPAC Chairperson, and in 1993, President-Elect. In 1988, she represented the MSMA Alliance at the White House Conference for a Drug Free America. Jean was Alliance Member of the Year in 1992.

She is active on many boards and committees. Jean currently devotes time to the Helias Foundation, St. Mary's Health Center Board of Regents and Foundation, Mid-Missouri Medical Foundation and the American Cancer Society Reach For Recovery Program. Because of her personal experience with breast cancer, Jean volunteers a lot of her time providing support to breast cancer patients.

The Wankums have a son, Andrew, who is a student at St. Norbert College in DePere, Wisconsin, and a daughter, Stephanie, who is a high school senior and will be attending Marquette University in Milwaukee, Wisconsin in the Fall. Jean enjoys reading, needlework, travelling and snow skiing.

In her inaugural address, Jean conveyed that the crisis of change that the medical community feels can be better dealt with by uniting efforts. She said, "We all know that economics plays a part in health reform and our practices but it is not at the heart of why we are in medicine. We must not remain alone in our struggle as medicine is redefined, but together share ideas, serve our patients, educate each other and our communities and most of all continue our friendships."

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*† Relief began in 13% of treated patients vs 4% of placebo-treated patients within 30 minutes (P=.04). At 2 hours, 48% of patients receiving placebo experienced relief. Distribution of onset times was significantly earlier for CLARITIN Tablets vs placebo (P=.03).*

*Please see following page for brief summary of Prescribing Information.*

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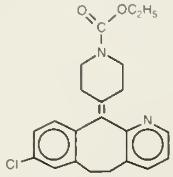
## brand of loratadine

PRODUCT
INFORMATION

## TABLETS
## Long-Acting Antihistamine

**DESCRIPTION** CLARITIN Tablets contain 10 mg micronized loratadine, an antihistamine, to be administered orally. They also contain the following inactive ingredients: corn starch, lactose, and magnesium stearate

Loratadine is a white to off-white powder not soluble in water, but very soluble in acetone, alcohol, and chloroform. It has a molecular weight of 382.89, and empirical formula of $C_{22}H_{23}ClN_2O_2$; its chemical name is ethyl 4-(8-chloro-5,6-dihydro-11*H*-benzo[5,6]cyclohepta[1,2-*b*]pyridin-11-ylidene)-1-piperidinecarboxylate and has the following structural formula



**CLINICAL PHARMACOLOGY** Loratadine is a long-acting tricyclic antihistamine with selective peripheral histamine $H_1$-receptor antagonistic activity.

Human histamine skin wheal studies following single and repeated 10 mg oral doses of CLARITIN Tablets have shown that the drug exhibits an antihistaminic effect beginning within 1 to 3 hours, reaching a maximum at 8 to 12 hours and lasting in excess of 24 hours. There was no evidence of tolerance to this effect after 28 days of dosing with CLARITIN Tablets.

Pharmacokinetic studies following single and multiple oral doses of loratadine in 115 volunteers showed that loratadine is rapidly absorbed and extensively metabolized to an active metabolite (descarboethoxyloratadine). The specific enzyme systems responsible for metabolism have not been identified. Approximately 80% of the total dose administered can be found equally distributed between urine and feces in the form of metabolic products after 10 days. The mean elimination half-lives found in studies in normal adult subjects (n = 54) were 8.4 hours (range = 3 to 20 hours) for loratadine and 28 hours (range = 8.8 to 92 hours) for the major active metabolite (descarboethoxyloratadine). In nearly all patients, exposure (AUC) to the metabolite is greater than exposure to parent loratadine

In a study involving twelve healthy geriatric subjects (66 to 78 years old), the AUC and peak plasma levels (Cmax) of both loratadine and descarboethoxyloratadine were significantly higher (approximately 50% increased) than in studies of younger subjects. The mean elimination half-lives for the elderly subjects were 18.2 hours (range = 6.7 to 37 hours) for loratadine and 17.5 hours (range = 11 to 38 hours) for the active metabolite.

Loratadine, dosed once daily, had reached steady-state by the fifth daily dose. The pharmacokinetics of loratadine and descarboethoxyloratadine are dose independent over the dose range of 10 to 40 mg and are not significantly altered by the duration of treatment.

In the clinical efficacy studies, CLARITIN Tablets were administered before meals. In a single-dose study, food increased the AUC of loratadine by approximately 40% and of descarboethoxyloratadine by approximately 15%. The time to peak plasma concentration (Tmax) of loratadine and descarboethoxyloratadine was delayed by 1 hour with a meal. Although these differences would not be expected to be clinically important, CLARITIN Tablets should be administered on an empty stomach.

In patients with chronic renal impairment (Creatinine Clearance ≤ 30 mL/min) both the AUC and peak plasma levels (Cmax) increased on average by approximately 73% for loratadine; and approximately by 120% for descarboethoxyloratadine, compared to individuals with normal renal function. The mean elimination half-lives of loratadine (7.6 hours) and descarboethoxyloratadine (23.9 hours) were not significantly different from that observed in normal subjects. Hemodialysis does not have an effect on the pharmacokinetics of loratadine or its active metabolite (descarboethoxyloratadine) in subjects with chronic renal impairment.

In patients with chronic alcoholic liver disease the AUC and peak plasma levels (Cmax) of loratadine were double while the pharmacokinetic profile of the active metabolite (descarboethoxyloratadine) was not significantly changed from that in normals. The elimination half-lives for loratadine and descarboethoxyloratadine were 24 hours and 37 hours, respectively, and increased with increasing severity of liver disease.

There was considerable variability in the pharmacokinetic data in all studies of CLARITIN Tablets, probably due to the extensive first-pass metabolism. Individual histograms of area under the curve, clearance, and volume of distribution showed a log normal distribution with a 25-fold range in distribution in healthy subjects.

Loratadine is about 97% bound to plasma proteins at the expected concentrations (2.5 to 100 ng/mL) after a therapeutic dose. Loratadine does not affect the plasma protein binding of warfarin and digoxin. The metabolite descarboethoxyloratadine is 73% to 77% bound to plasma proteins (at 0.5 to 100 ng/mL).

Whole body autoradiographic studies in rats and monkeys, radiolabeled tissue distribution studies in mice and rats, and *in vivo* radioligand studies in mice have shown that neither loratadine nor its metabolites readily cross the blood-brain barrier. Radioligand binding studies with guinea pig pulmonary and brain $H_1$-receptors indicate that there was preferential binding to peripheral versus central nervous system $H_1$-receptors.

Clinical trials of CLARITIN Tablets involved over 10,700 patients who received either CLARITIN Tablets or another antihistamine and/or placebo in double-blind randomized controlled studies. In placebo-controlled trials, 10 mg once daily of CLARITIN Tablets was superior to placebo and similar to clemastine (1 mg BID) or terfenadine (60 mg BID) in effects on nasal and non-nasal symptoms of allergic rhinitis. In these studies, somnolence occurred less frequently with CLARITIN Tablets than with clemastine and at about the same frequency as terfenadine or placebo. In studies with CLARITIN Tablets at doses 2 to 4 times higher than the recommended dose of 10 mg, a dose-related increase in the incidence of somnolence was observed. Therefore, some patients, particularly those with hepatic or renal impairment and the elderly, may experience somnolence

In a study in which CLARITIN Tablets were administered at 4 times the clinical dose for 90 days, no clinically significant increase in the QTc was seen on ECGs.

**INDICATIONS AND USAGE** CLARITIN Tablets are indicated for the relief of nasal and non-nasal symptoms of seasonal allergic rhinitis.

**CONTRAINDICATIONS** CLARITIN Tablets are contraindicated in patients who are hypersensitive to this medication or to any of its ingredients.

**PRECAUTIONS** **General**: Patients with liver impairment should be given a lower initial dose (10 mg every other day) because they have reduced clearance of CLARITIN Tablets.

**Drug Interactions**: The coadministration of a single 20 mg dose of CLARITIN Tablets (double the recommended daily dose) and a 200 mg dose of ketoconazole twice daily to 12 subjects resulted in increased plasma concentrations of loratadine (180% increase in AUC) and its active metabolite, descarboethoxyloratadine (56% increase in AUC). However, no related changes were noted in the QTc on ECGs taken at 2, 6, and 24 hours after the coadministration of loratadine and ketoconazole. Also, there were no significant differences in clinical adverse events between CLARITIN Tablet groups with or without ketoconazole.

Other drugs known to inhibit hepatic metabolism should be coadministered with caution until definitive interaction studies can be completed. The number of subjects who concomitantly received macrolide antibiotics, cimetidine, ranitidine, or theophylline along with CLARITIN Tablets in controlled clinical trials is too small to rule out possible drug-drug interactions. There does not appear to be an increase in adverse events in subjects who received oral contraceptives and CLARITIN Tablets compared to placebo.

**Carcinogenesis, Mutagenesis, and Impairment of Fertility**: In an 18-month oncogenicity study in mice and a 2-year study in rats, loratadine was administered in the diet at doses up to 40 mg/kg (mice) and 25 mg/kg (rats). In the carcinogenicity studies, pharmacokinetic assessments were carried out to determine animal exposure to the drug. AUC data demonstrated that the exposure of mice given 40 mg/kg of loratadine was 3.6 (loratadine) and 18 (active metabolite) times higher than a human given 10 mg/day. Exposure of rats given 25 mg/kg of loratadine was 28 (loratadine) and 67 (active metabolite) times higher than a human given 10 mg/day. Male mice given 40 mg/kg had a significantly higher incidence of hepatocellular tumors (combined adenomas and carcinomas) than concurrent controls. In rats, a significantly higher incidence of hepatocellular tumors (combined adenomas and carcinomas) was observed in males given 10 mg/kg and males and females given 25 mg/kg. The clinical significance of these findings during long-term use of CLARITIN Tablets is not known.

In mutagenicity studies, there was no evidence of mutagenic potential in reverse (AMES) or forward point mutation (CHO-HGPRT) assays, or in the assay for DNA damage (Rat Primary Hepatocyte Unscheduled DNA Assay) or in two assays for chromosomal aberrations (Human Peripheral Blood Lymphocyte Clastogenesis Assay and the Mouse Bone Marrow Erythrocyte Micronucleus Assay). In the Mouse Lymphoma Assay, a positive finding occurred in the nonactivated but not the activated phase of the study.

Loratadine administration produced hepatic microsomal enzyme induction in the mouse at 40 mg/kg and rat at 25 mg/kg, but not at lower doses.

Decreased fertility in male rats, shown by lower female conception rates, occurred at approximately 64 mg/kg and was reversible with cessation of dosing. Loratadine had no effect on male or female fertility or reproduction in the rat at doses of approximately 24 mg/kg.

**Pregnancy Category B**: There was no evidence of animal teratogenicity in studies performed in rats and rabbits. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, CLARITIN Tablets should be used during pregnancy only if clearly needed.

**Nursing Mothers**: Loratadine and its metabolite, descarboethoxyloratadine, pass easily into breast milk and achieve concentrations that are equivalent to plasma levels with an $AUC_{milk}/AUC_{plasma}$ ratio of 1.17 and 0.85 for the parent and active metabolite, respectively. Following a single oral dose of 40 mg, a small amount of loratadine and metabolite was excreted into the breast milk (approximately 0.03% of 40 mg over 48 hours). A decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother. Caution should be exercised when CLARITIN Tablets are administered to a nursing woman.

**Pediatric Use**: Safety and effectiveness in children below the age of 12 years have not been established.

**ADVERSE REACTIONS** Approximately 90,000 patients received CLARITIN Tablets 10 mg once daily in controlled and uncontrolled studies. Placebo-controlled clinical trials at the recommended dose of 10 mg once a day varied from 2 weeks' to 6 months' duration. The rate of premature withdrawal from these trials was approximately 2% in both the treated and placebo groups.

REPORTED ADVERSE EVENTS WITH AN INCIDENCE OF MORE THAN 2%
IN PLACEBO-CONTROLLED ALLERGIC RHINITIS CLINICAL TRIALS

PERCENT OF PATIENTS REPORTING

| | **LORATADINE**<br>10 mg OD<br>n = 1926 | **PLACEBO**<br><br>n = 2545 | **CLEMASTINE**<br>1 mg BID<br>n = 536 | **TERFENADINE**<br>60 mg BID<br>n = 684 |
|---|---|---|---|---|
| Headache | 12 | 11 | 8 | 8 |
| Somnolence | 8 | 6 | 22 | 9 |
| Fatigue | 4 | 3 | 10 | 2 |
| Dry Mouth | 3 | 2 | 4 | 3 |

Adverse event rates did not appear to differ significantly based on age, sex or race, although the number of non-white subjects was relatively small.

In addition to those adverse events reported above, the following advers events have been reported in 2% or fewer patients.

*Autonomic Nervous System* Altered salivation, increased sweating altered lacrimation, hypoesthesia, impotence, thirst, flushing

*Body As A Whole* Conjunctivitis, blurred vision, earache, eye pain tinnitus, asthenia, weight gain, back pain, leg cramps, malaise, chest pain rigors, fever, aggravated allergy, upper respiratory infection, angioneuroti edema.

*Cardiovascular System* Hypotension, hypertension, palpitations, syncope, tachycardia.

*Central and Peripheral Nervous System* Hyperkinesia, blepharospasm paresthesia, dizziness, migraine, tremor, vertigo, dysphonia.

*Gastrointestinal System* Abdominal distress, nausea, vomiting, flatulence, gastritis, constipation, diarrhea, altered taste, increased appetite anorexia, dyspepsia, stomatitis, toothache.

*Musculoskeletal System* Arthralgia, myalgia

*Psychiatric* Anxiety, depression, agitation, insomnia, paroniria, amnesia impaired concentration, confusion, decreased libido, nervousness.

*Reproductive System* Breast pain, menorrhagia, dysmenorrhea, vaginitis

*Respiratory System* Nasal dryness, epistaxis, pharyngitis, dyspnea nasal congestion, coughing, rhinitis, hemoptysis, sinusitis, sneezing, bronchospasm, bronchitis, laryngitis.

*Skin and Appendages* Dermatitis, dry hair, dry skin, urticaria, rash, pruritus, photosensitivity reaction, purpura.

*Urinary System* Urinary discoloration, altered micturition.

In addition, the following spontaneous adverse events have been reporte rarely during the marketing of loratadine: peripheral edema; abnormal hepatic function, including jaundice, hepatitis, and hepatic necrosis; alopecia seizures; breast enlargement; erythema multiforme, and anaphylaxis.

**DRUG ABUSE AND DEPENDENCE** There is no information to indicate tha abuse or dependency occurs with CLARITIN Tablets.

**OVERDOSAGE** Somnolence, tachycardia, and headache have been reported with overdoses greater than 10 mg (40 to 180 mg). In the event o overdosage, general symptomatic and supportive measures should b instituted promptly and maintained for as long as necessary.

Treatment of overdosage would reasonably consist of emesis (ipeca syrup), except in patients with impaired consciousness, followed by the administration of activated charcoal to absorb any remaining drug. If vomitin is unsuccessful, or contraindicated, gastric lavage should be performe with normal saline. Saline cathartics may also be of value for rapid dilutio of bowel contents. Loratadine is not eliminated by hemodialysis. It is no known if loratadine is eliminated by peritoneal dialysis.

Oral $LD_{50}$ values for loratadine were greater than 5000 mg/kg in rats an mice. Doses as high as 10 times the recommended clinical doses showe no effects in rats, mice, and monkeys.

**DOSAGE AND ADMINISTRATION** Adults and children 12 years of age an over: One 10 mg tablet daily on an empty stomach.

In patients with liver failure, 10 mg every other day should be the star ing dose.

**HOW SUPPLIED** CLARITIN Tablets, 10 mg, white to off-white compresse tablets, impressed with the product identification number "458" on on side; and "CLARITIN 10" on the other; high density polyethylene plastic bo tles of 100 (NDC 0085-0458-03). Also available, CLARITIN Unit-of-Use packages of 14 tablets (7 tablets per blister card) (NDC 0085-0458-01) and 3 tablets (10 tablets per blister card) (NDC 0085-0458-05); and 10 x 10 tabl Unit Dose-Hospital Pack (NDC 0085-0458-04).

**Protect Unit-of-Use packaging and Unit Dose-Hospital Pack fro excessive moisture. Store between 2° and 30°C (36° and 86°F).**

Schering®

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Kenilworth, NJ 07033 USA

Rev. 9/93

177908

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**CLARITIN®**
**brand of loratadine**
**TABLETS**
**Long-Acting Antihistamine**

**BRIEF SUMMARY**
(For full Prescribing Information, see package insert.)

**INDICATIONS AND USAGE**
CLARITIN Tablets are indicated for the relief of nasal and non-nasal symptoms of seasonal allergic rhinitis

**CONTRAINDICATIONS**
CLARITIN Tablets are contraindicated in patients who are hypersensitive to this medication or to any of its ingredients

**PRECAUTIONS**
**General:** Patients with liver impairment should be given a lower initial dose (10 mg every other day) because they have reduced clearance of CLARITIN Tablets

**Drug Interactions:** The coadministration of a single 20 mg dose of CLARITIN Tablets (double the recommended daily dose) and a 200 mg dose of ketoconazole twice daily to 12 subjects resulted in increased plasma concentrations of loratadine (180% increase in AUC) and its active metabolite, descarboethoxyloratadine (56% increase in AUC). However, no related changes were noted in the QTc on ECGs taken at 2, 6, and 24 hours after the coadministration of loratadine and ketoconazole Also, there were no significant differences in clinical adverse events between CLARITIN Tablet groups with or without ketoconazole

Other drugs known to inhibit hepatic metabolism should be coadministered with caution until definitive interaction studies can be completed The number of subjects who concomitantly received macrolide antibiotics, cimetidine ranitidine or theophylline along with CLARITIN Tablets in controlled clinical trials is too small to rule out possible drug-drug interactions There does not appear to be an increase in adverse events in subjects who received oral contraceptives and CLARITIN Tablets compared to placebo

**Carcinogenesis, Mutagenesis, and Impairment of Fertility:** In an 18-month oncogenicity study in mice and a 2-year study in rats, loratadine was administered in the diet at doses up to 40 mg/kg (mice) and 25 mg/kg (rats) In the carcinogenicity studies, pharmacokinetic assessments were carried out to determine animal exposure to the drug AUC data demonstrated that the exposure of mice given 40 mg/kg of loratadine was 3 6 (loratadine) and 18 (active metabolite) times higher than a human given 10 mg/day Exposure of rats given 25 mg/kg of loratadine was 28 (loratadine) and 67 (active metabolite) times higher than a human given 10 mg/day Male mice given 40 mg/kg had a significantly higher incidence of hepatocellular tumors (combined adenomas and carcinomas) than concurrent controls In rats, a significantly higher incidence of hepatocellular tumors (combined adenomas and carcinomas) was observed in males given 10 mg/kg and males and females given 25 mg/kg The clinical significance of these findings during long-term use of CLARITIN Tablets is not known

In mutagenicity studies, there was no evidence of mutagenic potential in reverse (AMES) or forward point mutation (CHO-HGPRT) assays, or in the assay for DNA damage (Rat Primary Hepatocyte Unscheduled DNA Assay) or in two assays for chromosomal aberrations (Human Peripheral Blood Lymphocyte Clastogenesis Assay and the Mouse Bone Marrow Erythrocyte Micronucleus Assay) In the Mouse Lymphoma Assay a positive finding occurred in the nonactivated but not the activated phase of the study

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*Gastrointestinal System* Abdominal distress, nausea, vomiting, flatulence gastritis, constipation, diarrhea altered taste, increased appetite, anorexia, dyspepsia, stomatitis, toothache
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*Respiratory System* Nasal dryness, epistaxis, pharyngitis, dyspnea, nasal congestion, coughing, rhinitis, hemoptysis sinusitis, sneezing, bronchospasm, bronchitis, laryngitis
*Skin and Appendages* Dermatitis, dry hair, dry skin, urticaria, rash, pruritus, photosensitivity reaction, purpura
*Urinary System* Urinary discoloration, altered micturition

In addition, the following spontaneous adverse events have been reported rarely during the marketing of loratadine peripheral edema, abnormal hepatic function, including jaundice, hepatitis, and hepatic necrosis alopecia seizures breast enlargement; erythema multiforme and anaphylaxis

**OVERDOSAGE**
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***Reference***
*1. Bèdard P-M, Del Carpio J, Drouin MA, et al. Onset of action of loratadine and placebo and other efficacy variables in patients with seasonal allergic rhinitis.*
*Clin Ther. 1992;14:268-275*

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# The Hospital Medical Staff Section 23rd Assembly Meeting June 9-13, 1994 Chicago, Marriott Hotel Chicago, Illinois

## Interactive Dialogue with AMA Board of Trustees

HMSS representatives will not want to miss this year's AMA-HMSS Annual Assembly Meeting held on June 9-13 in Chicago. Aside from the usual policy-related activities, representatives will have an opportunity to dialogue with the AMA Board of Trustees, hear the latest news and information from Washington, and learn the importance of and methods for physician involvement in health system reform.

The Friday education program hosts an impressive panel of speakers. From their remarks, representatives will learn: the impact of proposed legislation on the future practice of medicine; the kinds of managed care entities most likely to thrive; the ways to cope with health care delivery changes at the local level; the support needed to pass legislation on physician involvement in health system reform; the steps for developing a physician-directed health delivery network or plan; and the best methods for managing patient care and physician compensation in physician health plans.

## Physician Involvement in Health System Reform

With health system reform legislation pending before Congress, state health system reform initiatives, and the rapid development of integrated delivery systems, it is vitally important that medical staff mobilize to stand up and speak out for patients and the profession. The June Assembly meeting is no exception. Now perhaps more than ever before, HMSS representatives need to be involved in shaping the nation's future health care system.

Success will depend on unified physician support and action. Mark you calendar and plan to attend!

**For more information please call**
**312 464-4754 or 464-4761**

American Medical Association
Physicians dedicated to the health of America

# Missouri State Medical Services, Inc.

The Missouri State Medical Association recently established Missouri State Medical Services, Inc., a wholly owned subsidiary of MSMA. This company is a physician focused and physician directed Management Service Organization (MSO) which was formed by MSMA physicians to form a Physicians Organization (PO), and to provide practice management consultation services to fellow physicians at an affordable and competitive rate.

**The goals of the Missouri State Medical Services, Inc. include:**

- **To provide to physicians medical practice management services.**
- **To plan and institute a database that will track and analyze clinical data, treatment outcomes, patient satisfaction, practice expenses and cost utilization.**
- **To assess, design and plan a Physician Organization (PO).**
- **To improve patient access and maintain optimal patient care.**

MSMS has recently appointed Tom Bennett as its Executive Vice President. The board of directors include: Dan O'Sullivan, MD, *St. Louis*; Jeff Copeland, MD, *St. Charles*; Lent Johnson, MD, *Hannibal*; Bill Shell, MD, *Sikeston*; Jerry Kennett, MD, *Columbia*; Steve Buie, MD, *Lee's Summit*; Bill Dorzab, MD, *Kansas City*; John Rollo, MD, *St. Louis*; Wayne Miles, MD, *Springfield*; Fred Hahn, MD, *Independence* and Pat Mills, CPA, *MSMA*.

**The range of services provided by MSMS include:**

- **Practice Assessment**
- **On-Site Management, long term and short term**
- **Physician and Executive Recruitment**
- **Program and Service Design and Development**
- **Managed Care Contract Analysis**
- **Direct Contract Analysis and Negotiations**
- **Reimbursement Analysis and Negotiations**
- **Data Management/Computer Assessment**
- **Strategic Marketing-Planning**
- **Human Resource and Personnel Management**
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- **Purchase, Sale and Integration of Practices**
- **Group Practice Design and Planning**
- **Physician Compensation Formulas**
- **Federal Regulatory Compliance**

For a referral for services or for information please call:
TOM BENNETT, 1-800-633-1516.

# Ophthalmology Quiz #5

John C. Hagan III, MD

This is a collection of retinal and optic nerve pathology.
Match the six photographs with the best diagnosis from the list of possible diagnoses.

Figure 1 ______

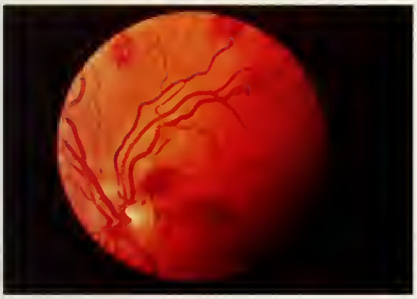


Figure 2 ______

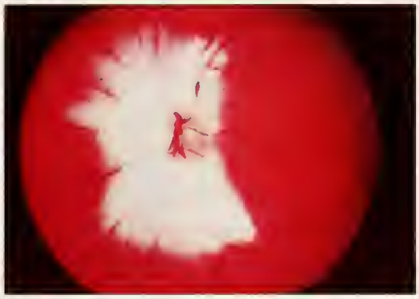
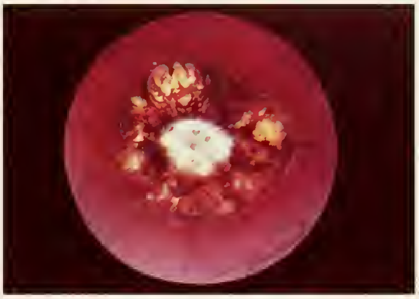


Figure 3 ______



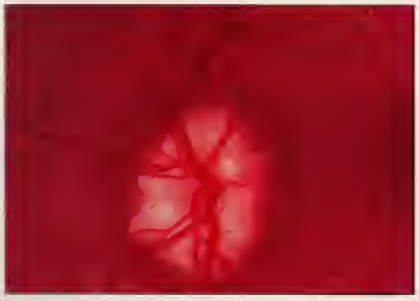


Figure 4 ______

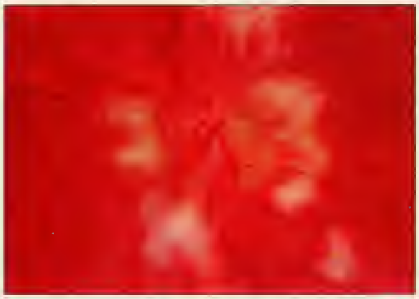


Figure 5 ______

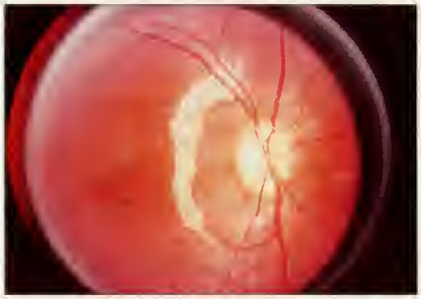


Figure 6 ______

## POSSIBLE DIAGNOSES

A. papilledema
B. pseudo-papilledema
C. optic nerve atrophy
D. old, inactive chorio-retinitis
E. myelinated nerve fibers
F. hard, lipid exudates
G. soft, "cotton-wool" exudates
H. Roth spots
I. fresh, active chorio-retinitis
J. retinoblastoma involving optic nerve

(See answers on next page.)

**The Ophthalmology Quiz is produced and coordinated by John C. Hagan III, MD, Director, Midwest Eye Institute of Kansas City, Inc., North Kansas City, Missouri. Financial support for this feature is provided by ALCON SURGICAL, North Kansas City Hospital, Missouri Ophthalmological Society, Inc., CHIRON, Inc., MERCK & CO. Inc., O. H. Gerry Optical Co. and IOPTEX , Inc.**

# OPHTHALMOLOGY QUIZ ANSWER

(Ophthalmology Questions are on previous page.)

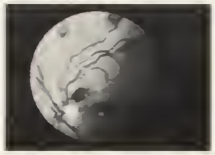


**Fig 1. Roth Spots:** These are white centered retinal hemorrhages. Roth spots are not specific for bacterial endocarditis and occur in only a minority of patients with that problem. This is a case of myelogenous leukemia. Roth spots also occur in systemic lupus erythematosus.

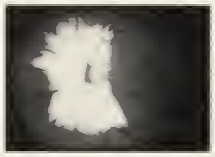


**Fig 2. Myelinated nerve fibers:** The fibers of the optic nerve usually only acquire a white myelin sheath behind the optic disc. Occasionally, as a developmental abnormality, myelin can be deposited on the optic nerve (Figure 7) or elsewhere in the retina (Figure 8). Myelinated nerve fibers are benign and stationary. In extremely large amounts as shown in our example they can cause an enlarged blind spot during visual field testing. These whitish lesions can be mistaken for papilledema, cotton-wool exudates or active retinitis.

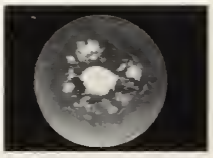


**Fig 3. Old, inactive chorio-retinitis:** An inactive lesion is indicated by the clear vitreous, flat, non-edematous retina and extensive scarring. While an exact etiology cannot be determined the macular location and the heavy pigmentation suggests Toxoplasmosis.

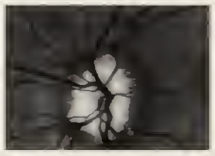


**Fig 4. Pseudo-papilledema:** This case of pseudo-papilledema is due to optic nerve drusen. The optic nerve drusen are the "rock candy" like crystals seen within the optic nerve substance. Other causes of pseudo-papilledema include ocular hypotension, myelinated nerve fibers, epipapillary membranes, farsightedness and optic nerve anomalies. Ophthalmology consultation to confirm true papilledema is always appropriate and may occasionally save an extensive neurological work-up.

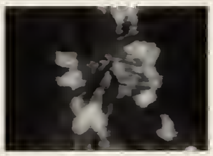
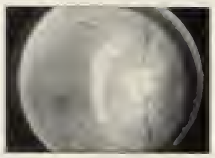


**Fig 5. Soft, "cotton-wool" exudates:** This is a case of advanced hypertensive retinopathy. Cotton-wool spots are transitory and represent areas of focal retinal ischemia causing micro-infarcts of the nerve fiber layer. They may occur in hypertension, diabetes, connective tissue disease, blood dyscrasias and AIDS.



**6. Optic nerve atrophy:** This case is due to trauma. Also shown is a traumatic rupture of the choroid causing the annular, whitish scar temporal to the optic nerve. The optic nerve is flat, pale white and lacks normal vascularization.

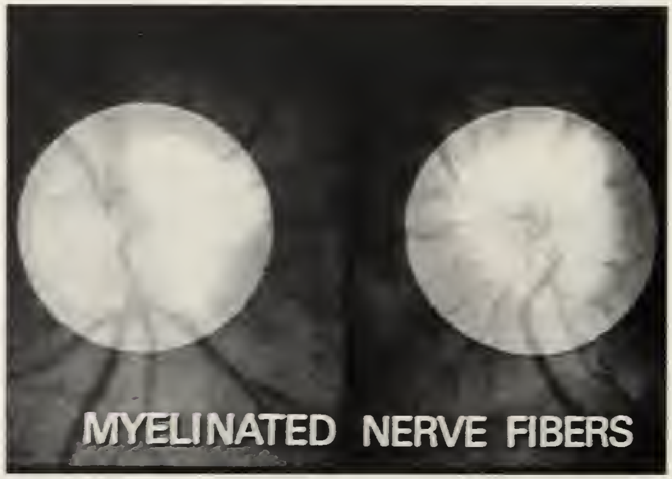


Figure 7 - Myelinated or medullated nerve fibers are a benign, congenital developmental abnormality that may be mistaken for more serious problems such as cotton-wool spots.

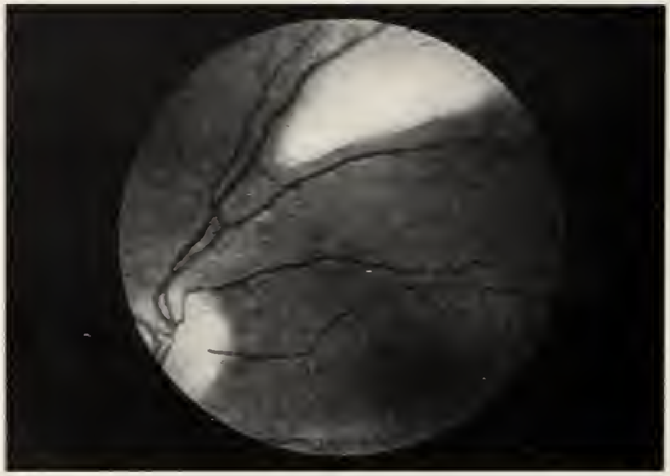


Figure 8 - Peripheral myelinated nerve fibers can occur anywhere in the retina as demonstrated by this superior, triangular shaped area of myelin.

*References*

1. American Academy of Ophthalmology: *Basic Ophthalmology for medical students and primary care residents.* 6th Edition, Frank G. Berson, Editor. San Francisco

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**SPECIAL SERIES: Public Health Reports**

# Syphilis in Missouri: A Continuing Problem

Robert H. Hamm, MD, MPH, H. Denny Donnell, Jr, MD, MPH, Bill Huber

**Syphilis has re-emerged as a significant public health problem in the United States and in Missouri. Reported cases of primary and secondary (P&S) syphilis and congenital syphilis in Missouri have been increasing since the late 1980s, and a major outbreak of these diseases continues in the St. Louis area. The nature of syphilis combined with certain characteristics of those populations at highest risk of infection can make prevention and control difficult. Achieving success requires the cooperative efforts of practicing physicians and public health professionals.**

Syphilis has again become a significant problem in certain areas of Missouri. Recent outbreaks of primary and secondary syphilis have occurred in the St. Louis area (St. Louis City and County), Kansas City, and the "Bootheel" region of southeastern Missouri. Accompanying the increases in P&S syphilis cases have been increases in reported cases of congenital syphilis, especially in the St. Louis area, where epidemics of both P&S and congenital syphilis continue to occur.

This report will describe the epidemiology of syphilis in Missouri and discuss the implications of these findings for the practicing physician.

## METHODS

In Missouri, physicians are required to report all cases of syphilis to public health authorities by telephone within 24 hours of diagnosis, followed by a written case report within 7 days. In addition, laboratories are required to report in the same manner any test result that is positive for, or suggestive of, syphilis, regardless of any previous reports that may have been submitted on the same person. All reports eventually come to the Bureau of STD/HIV Prevention at the Missouri Department of Health, where they are entered into a computerized database and then analyzed. From this analysis comes summary information presented in the following section.

All state and territorial health departments transmit summaries of the data obtained through syphilis reporting to the Centers for Disease Control and Prevention (CDC). CDC analyzes these data and periodically publishes summaries describing the epidemiology of syphilis in the United States. Such summaries are the

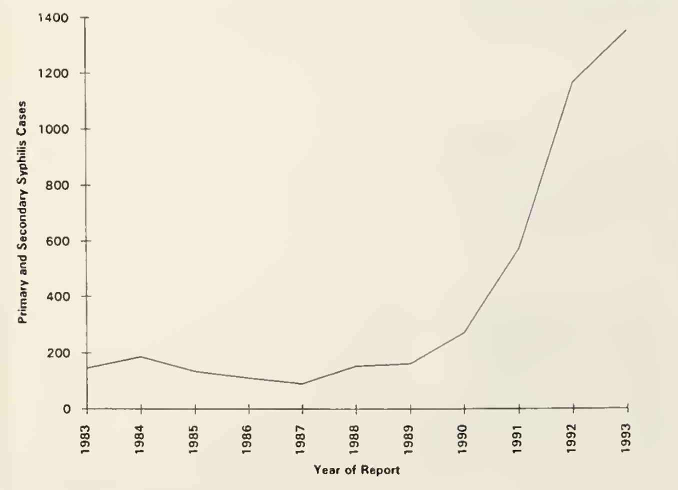

Figure 1. Primary and Secondary Syphilis Cases by Year of Report, Missouri, 1983-1993

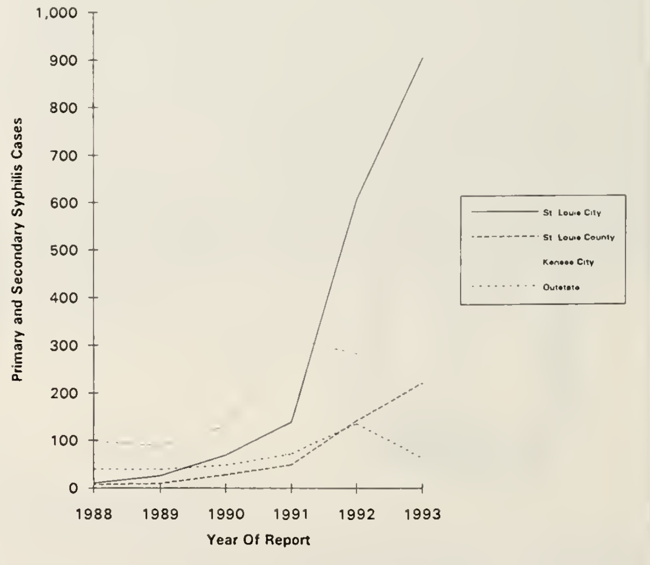

Figure 2. Primary and Secondary Syphilis Cases by Geographic Area and Year of Report, Missouri, 1988-1993

source of the information presented below on nationwide syphilis trends.

## RESULTS

The yearly incidence of P&S syphilis cases in Missouri has been increasing each year since 1987, although the rate of increase slowed markedly in 1993 (Fig 1). During 1993, a total of 1,354 cases was reported, an increase of 16% over the 1,167 cases reported in 1992. This contrasts with an increase of 104% in the number of reported cases between 1991 and 1992.

P&S syphilis cases have been primarily concentrated in the St. Louis area and in Kansas City, although smaller numbers of cases are also reported from a number of "outstate" counties (Fig 2). Cases of P&S syphilis in Kansas City peaked in 1991, and have subsequently been declining. An outbreak of P&S syphilis occurred in the "Bootheel" area during 1992, but reported cases from this area declined markedly during 1993. In the St. Louis area, the increase in reported cases, which has been occurring since 1988, and which became especially apparent in St. Louis City in 1992, has continued. Between 1992 and 1993, the number of reported P&S cases increased by 49.3% in St. Louis City and 57.4% in St. Louis County; in other areas of the state a decline in the number of reported cases was observed.

The incidence of congenital syphilis generally follows that of P&S syphilis, and this is reflected by the fact that the yearly number of reported cases of congenital syphilis has been increasing since 1989 (Fig 3). The increase in cases was especially striking between 1992 and 1993, when the annual number of reported cases rose from 28 to 97, an increase of 246%. Seventy eight (80.4%) of these 97 cases were from the St. Louis area, where a major outbreak of congenital syphilis is occurring.

The relationship of P&S syphilis to congenital syphilis also is seen by observing the occurrence of the latter disease in specific geographic areas which were already experiencing outbreaks of P&S syphilis (Fig 4). Those areas of the state which have reported the largest numbers of P&S cases also have reported, as expected, most of the congenital cases. However, as in the case of P&S syphilis, congenital cases also are being seen in some of the less populated, rural counties in the state, demonstrating the potential for this disease to occur anywhere.

Of the 1,354 P&S syphilis cases reported during 1993, 716 (52.9%) were in males and 638 (47.1%) were in females. The nearly equal percentages of male and female cases is an indication that heterosexual contact is the predominant means of transmission in these individuals. The largest number of reported cases, 544 (40.2%), occurred in the 20 to 29-year-old age group. However, a significant number of cases was reported in teenagers, i.e., 165 cases (12.2%) occurred in the 10 to 19-year-old age group; among black females, 103 (17.3 %) of the 596 total cases were in this age group. Blacks were disproportionately represented among Missouri P&S syphilis cases in 1993, comprising 1,238 (91.4%) of the 1,354 total cases. The statewide rate for blacks was 225.8 per 100,000 population compared to a rate in whites of 2.3 per 100,000 population.

Congenital syphilis cases also showed a disproportionate representation of blacks. Eighty-six (88.7%) of the 97 congenital syphilis cases reported during 1993 were in blacks. The importance of teenage mothers in the current outbreak of congenital syphilis is reflected in the fact that 29 (29.9%) of the 97 cases were in infants

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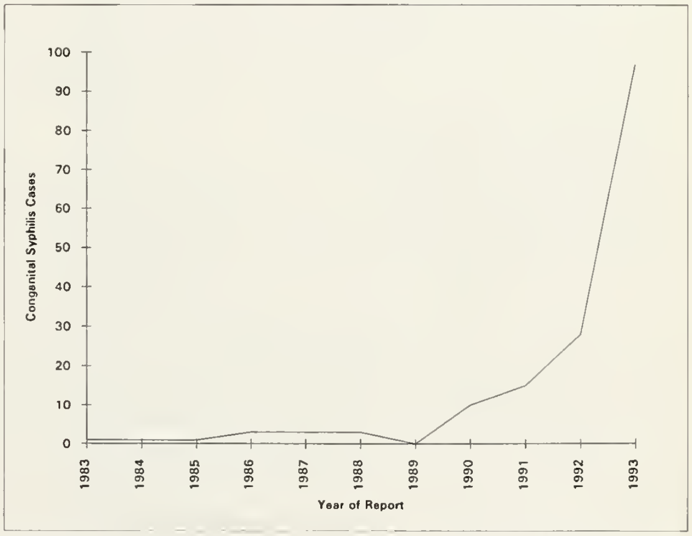

**Figure 3. Congenital Syphilis Cases by Year of Report, Missouri, 1983-1993**

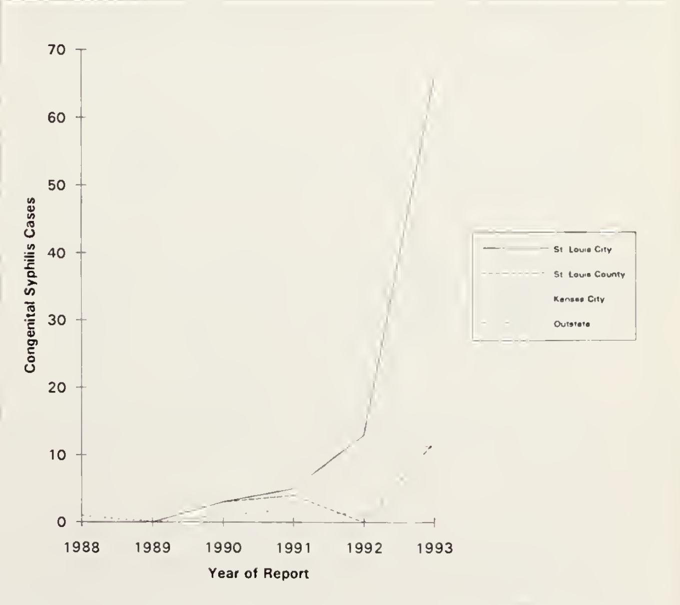

**Figure 4. Congenital Syphilis Cases by Geographic Area and Year of Report, Missouri, 1988-1993**

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born to mothers in the 15 to 19-year-old age group. The great majority of mothers of infants with congenital syphilis were either single or separated/divorced; together these two categories accounted for 89 (91.8%) of the 97 reported cases. Twenty nine (29.9%) of the 97 mothers of infants diagnosed with congenital syphilis received no prenatal care. The prenatal care status of 3 (3.1%) of the mothers was unknown. Of the remaining 65 mothers, who reported at least 1 prenatal clinic visit, a total of 20 (30.8%) had 3 or fewer visits; and a total of 40 (61.5%) had 6 or less visits.

P&S (as well as congenital) syphilis cases have occurred most frequently in persons who live in lower socioeconomic neighborhoods. In St. Louis City, for example, the median family income, based on 1990 census data, for the five zip code areas with the highest rates of syphilis ranged from $10,243 to $20,211. This compares with a median family income for St. Louis City of $24,274, and a statewide figure of $31,838.

Nationwide, an epidemic of P&S syphilis predominantly involving heterosexual, low-income, inner city blacks and Hispanics began in the mid-1980s and peaked in 1990, with numbers of reported cases reaching levels not seen since the early 1950s. After 1990, decreases occurred in the annual incidence of reported cases in all regions of the country except the Midwest region. In this region, which includes Missouri, the epidemic began later and reported cases continued to increase through 1992, although during 1992 the rate of increase slowed compared with previous years. The nationwide rate per 100,000 persons for 1992, the last year for which national data is available, was 13.7. Missouri's rate for the same year was 22.8, giving the state an overall ranking of 10th among the 50 states. St. Louis experienced a rate of 153.3 per 100,000 persons in 1992, the highest reported rate among American cities with a population of over 200,000 persons.[1-4]

Congenital syphilis cases nationwide began to increase in 1984, an increase which became especially striking in 1989. A peak was reached in 1991, with a subsequent slight decline in 1992. The overall rate per 100,000 live births was 94.7 in 1992; the corresponding rate in Missouri that year was 37.1.[1]

Corresponding to the situation in Missouri, rates of both P&S syphilis and congenital syphilis in the United States have been much higher in blacks than whites. During 1992, the P&S syphilis rate per 100,000 persons in blacks nationwide was 92.4, compared with a rate of 1.5 in whites.[1]

For congenital syphilis cases nationwide, as in Missouri, maternal risk factors include being a member of a minority racial/ethnic group, being an adolescent, living in an inner city neighborhood, being unmarried, and not having adequate prenatal care. In many areas, the occurrence of syphilis is associated with the use of illicit drugs, especially crack cocaine.[4-6]

## DISCUSSION

Since the late 1980s, outbreaks of P&S syphilis, primarily involving heterosexuals, have occurred in the St. Louis area, Kansas City, and the "Bootheel" region of southeastern Missouri. In the St. Louis area and in Kansas City, these outbreaks have been followed by associated outbreaks of congenital syphilis. The St. Louis area is continuing to experience very high levels of both P&S and congenital syphilis.

P&S syphilis cases are occurring, as expected, most commonly in the age groups which are most sexually active. During 1993, the 20-29 year old group provided the largest percentage of cases, 40.2%; teenagers accounted for slightly more than 12% of the total. With congenital syphilis, approximately 30% of infected infants during 1993 were born to teenage mothers. P&S cases, including the mothers of infants with congenital syphilis, often are of lower socioeconomic status, and blacks make up a very disproportionate share of the total reported cases. Race, it should be noted, is not a direct risk factor for syphilis, but rather serves as a surrogate for certain social, economic, behavioral, or other factors which are related more directly to acquiring infection and to not receiving appropriate medical care. Finally, a substantial proportion of congenital syphilis cases are associated with mothers who are unmarried and who do not receive adequate prenatal care.

In interpreting the data on congenital syphilis, it must be kept in mind that a new surveillance case definition came into use in the second half of 1990. This new case definition is more sensitive than the previous case definition in that it requires the reporting of all infants whose mothers had untreated or inadequately treated syphilis at delivery, regardless of the presence of clinical signs in the infant. As a result, part of the increase in congenital cases beginning in 1990 is due to this case definition change; however, the growth in cases also reflects a true increase in the occurrence of infection in infants.[7]

Many factors have contributed to the recent nationwide epidemics of P&S and congenital syphilis. These include the following:

- ☐ The nature of the disease itself is associated with delays in diagnosis. Syphilis has manifold manifestations, and its presentation can be subtle. If the clinician is not alert, the diagnosis may be missed. In addition, early syphilis symptoms tend to be mild and painless, and as a result, the individual continues to engage in sexual activity rather than seek medical attention.[8]

- If untreated, a syphilis-infected person can remain infectious for a prolonged period of time, during which he or she will have the opportunity to potentially infect a significant number of other persons.

- Syphilis cases tend to cluster in certain geographically and sociodemographically distinct population subgroups, termed "core groups." Core group members tend to be young persons of low educational and socioeconomic status, often involved in illicit drug use and prostitution. These individuals have proven extremely hard to reach with prevention messages. Also, such individuals often do not have adequate access to medical services and/or underutilize those services which are available. This constitutes an additional reason for delays in diagnosis and treatment, and for longer durations of untreated infection during which transmission to others can occur.[3,4,8]

- The use of illicit drugs, especially crack cocaine, by certain inner city populations has contributed to the epidemic of syphilis through the relationship between drug use and high-risk sexual behaviors. Crack cocaine in particular has become widespread in many of the same populations that are also experiencing high rates of syphilis. Low doses of cocaine can have the combined effect of decreased inhibition and increased sexual desire, potentially leading to less discerning selection of partners, increased numbers of sexual encounters, and increased high-risk sex practices. Crack cocaine users often exchange sex for money or drugs, and they tend to use condoms on an infrequent basis. Persons who are using crack frequently have many sex partners, often anonymous. When the identities of a patient's sexual partners are unknown, this makes partner tracing very difficult, and often impossible, thus greatly diminishing the ability of public health officials to prevent further spread of the infection. Crack cocaine use also appears to contribute to delays in seeking medical care. For many users, obtaining health care has been a low priority compared to their other concerns.[4,9]

Each of these factors has also contributed to the syphilis outbreaks that have been occurring in Missouri. The demographic composition of Missouri cases is similar to what is seen nationwide, and issues of access to, and utilization of, medical services are important here as well as elsewhere in the country. Precise data on the association of syphilis cases in Missouri to illicit drug use are not available; however, substantial anecdotal evidence obtained by public health investigators indicates that drugs, and especially crack cocaine, do play a significant role in promoting the spread of the disease.

## TABLE 1. Treatment of Syphilis in Adults and Children

**Adults with primary or secondary syphilis:**
**Benzathine penicillin G**, 2.4 million units IM in a single dose.

**HIV-infected adults with primary or secondary syphilis:**
**Benzathine penicillin G**, 2.4 million units IM, as for patients without HIV infection. Careful follow-up after therapy is essential. (Some experts recommend additional treatments, such as multiple doses of benzathine penicillin G, as suggested for late syphilis, or other supplemental antibiotics in addition to benzathine penicillin G 2.4 million units IM. In addition, some experts recommend CSF examination before therapy and modification of treatment accordingly.)

**Pregnant women with syphilis:**
The **penicillin regimen** appropriate for the woman's stage of syphilis. (Some experts recommend additional therapy [e.g., a second dose of benzathine penicillin 2.4 million units IM] 1 week after the initial dose, particularly for those women in the third trimester of pregnancy and for women who have secondary syphilis during pregnancy.)

**Infants with congenital syphilis:**
**Aqueous crystalline penicillin G**, 100,000-150,000 units/kg/day (administered as 50,000 units/kg IV every 12 hours during the first 7 days of life and every 8 hours thereafter) for 10-14 days, **or**
**Procaine penicillin G**, 50,000 units/kg IM daily in a single dose for 10-14 days.

An infant whose complete evaluation for congenital syphilis was normal and whose mother was a) treated for syphilis during pregnancy with erythromycin, or b) treated for syphilis <1 month before delivery, or c) treated with an appropriate regimen before or during pregnancy but did not yet have an adequate serologic response should be treated with **benzathine penicillin G**, 50,000 units/kg IM in a single dose. In some cases, infants with a normal complete evaluation for whom follow-up can be assured can be followed closely without treatment.

**Older Infants and Children with Congenital Syphilis:**
**Aqueous crystalline penicillin G**, 200,000-300,000 units/kg/day IV or IM (administered as 50,000 units/kg every 4-6 hours) for 10-14 days.

Although syphilis in Missouri is concentrated in the major metropolitan areas, cases do occur in other parts of the state, including less populated rural counties. Consequently, all physicians need to remain alert to the possible occurrence of the disease in their patients. Risk assessment for sexually transmitted diseases should be performed on all patients. A history of sexual contact

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with a person known or suspected to have syphilis (in any stage) warrants that the patient be evaluated clinically and serologically for evidence of infection. Presumptive treatment should be undertaken if the patient was either: a) exposed to an individual with early syphilis* within the preceding 90 days, and thus possibly infected even though seronegative; **or** b) exposed to an individual with early syphilis* >90 days before the time of the examination if serologic test results are not immediately available and the opportunity for follow-up is uncertain. If the patient's long-term sex partner is found to have late syphilis, then the patient should be evaluated clinically and serologically for evidence of infection.[10]

The preferred drug for treatment of all stages of syphilis is parenteral penicillin G. The specific penicillin preparation to be used, the dosage, and the duration of treatment depend on the stage and clinical manifestations of the infection. Parenteral penicillin G is the only treatment with documented efficacy for neurosyphilis or for syphilis during pregnancy. Table 1 lists the recommended treatment regimens for the situations the clinician is most likely to encounter. All persons treated for syphilis should have subsequent follow-up evaluations. Non-pregnant patients treated for P&S syphilis should be re-examined clinically and serologically at 3 months and again at 6 months; in the case of pregnant patients, serologic titers should be checked monthly until the adequacy of treatment has been assured. Comprehensive management and treatment guidelines have recently been published by CDC, and provide excellent guidance for the comprehensive care of the patient with any type of syphilis.[10] All physicians who provide care for syphilis patients should be familiar with these recommendations.

The diagnosis of congenital syphilis in the young infant can often be challenging. At least half of infected liveborn infants have no signs of the disease at the time of birth (and if the mother acquired her syphilis infection late in pregnancy, she also may not show any signs of disease before the time of delivery). When infection occurs late in pregnancy, serologic tests can be negative in an infected infant (and they may also be negative in the mother). The infant can remain seronegative until after 1 month of age.[7,11]

The use of serologic tests in diagnosing congenital syphilis can also be complicated by the passive transfer of maternal antibody to the fetus. As a consequence, a mother appropriately treated for syphilis during pregnancy can still transfer non-treponemal and treponemal antibodies to her fetus, and at the time of birth, the infant, though uninfected, will have positive non-treponemal and treponemal antibody tests. The nontreponemal titer will usually be less than or equal to the corresponding titer in the mother, and it will usually revert to negative in approximately 4-6 months.[11]

Given the presence of these types of complicating factors, the presumptive diagnosis of congenital syphilis, as well as treatment decisions, must often be based on: a) assessment of the mother's past and present clinical status and serologic test results, and her treatment history; **and** b) appropriate evaluation of the infant.

Health care providers who care for pregnant women are required by Missouri law to obtain, with the consent of the patient, a serologic test for syphilis on each pregnant woman at, or within 20 days of, her first visit for prenatal care. However, because of the congenital syphilis outbreaks that have been occurring in the state, the Missouri Department of Health currently recommends that syphilis testing be repeated on all pregnant women during the second trimester and again when the mother presents for delivery. Ideally, the results of the latter test should be known before the infant leaves the hospital. Syphilis screening using cord blood is not recommended because of the possibility of either a false-positive or a false-negative result.[7]

In general, a seropositive pregnant woman should be considered infected unless treatment history is clearly documented in the medical record and sequential serologic antibody titers have appropriately declined. The CDC treatment guidelines provide detailed recommendations for congenital syphilis.[10] Recommendations have also been issued by the American Academy of Pediatrics.[11] Both recommend treating **all** infants whose mothers have untreated or inadequately treated syphilis at delivery, regardless of whether the infants have any signs of disease. (Inadequate maternal treatment includes non-penicillin therapy or penicillin given less than 30 days before delivery.) The specific penicillin regimen recommended for the infant will depend on the mother's treatment history as well as the clinical and laboratory evaluation of the infant (see Table 1). Any infant of a mother considered to be infected with syphilis should be evaluated for evidence of congenital syphilis. This evaluation should include a thorough physical examination; a quantitative nontreponemal test for syphilis performed on the infant's sera; CSF analysis for cells, protein, and VDRL; long bone x-rays; and examination of the placenta or amniotic cord using specific fluorescent antitreponemal antibody staining.[10]

If the mother has untreated early syphilis, up to 40% of pregnancies will result in stillbirths or perinatal deaths.[7] Given the relationship of congenital syphilis to stillbirth, any woman who delivers a stillborn infant after 20 weeks gestation should be tested for evidence of syphilis infection.[10] Stillbirths associated with syphilis should be reported to public health authorities in the same manner as any other case of congenital syphilis.

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* Early syphilis includes primary, secondary, and latent (duration <1 year) syphilis. If the duration of the individual's syphilis infection is unknown, he or she may be considered to have early syphilis if the nontreponemal titer is ≥1:32.[10]

All patients with syphilis should be tested for human immunodeficiency virus (HIV) infection unless the individual is already known to be infected with HIV. In areas with high HIV prevalence, patients with primary syphilis should be retested for HIV after 3 months.[10] Prompt diagnosis and treatment of syphilis (and other sexually transmitted diseases) may decrease the overall risk of HIV transmission in the community since the presence of a disease such as syphilis significantly enhances the efficiency of HIV transmission.[12]

Preventing the occurrence of new cases of P&S syphilis requires the early diagnosis and appropriate treatment of infected persons, and the identification and evaluation of their sexual partners. These steps are also very important in the prevention of congenital syphilis because they will result in lower levels of syphilis in the community, and thus lessen the probabilities that infection will occur in pregnant women. In addition, congenital syphilis prevention requires that women obtain adequate prenatal care, which is started early in pregnancy, and which includes clinical and laboratory evaluation for evidence of syphilis infection.

Because those populations at high risk for syphilis do not adequately access medical services, innovative public health programs for screening and treatment are often needed in communities experiencing outbreaks of the disease. Improving access to clinical services where syphilis can be diagnosed and treated is crucial, as is the need to improve prenatal care services. Educational efforts specifically targeted at those groups who are at risk can also be beneficial. All these activities are currently being undertaken in the St. Louis area under the direction of a special syphilis task force.

Complementing these public health approaches to syphilis prevention and control is the vital role played by the practicing physician. Physicians can help significantly reduce the occurrence of syphilis by:

- ☐ Evaluating each patient, as appropriate, for evidence of syphilis or other sexually transmitted diseases, and for evidence of high-risk sexual behaviors.
- ☐ Promptly diagnosing and treating patients with syphilis according to current guidelines.
- ☐ Providing follow-up to patients treated for syphilis to ensure that treatment was effective and that reinfection has not occurred.
- ☐ Providing education and counseling to patients engaging in high risk sexual behaviors.
- ☐ Promptly reporting all syphilis cases to the local health department or to the Missouri Department of Health. Such reporting, in addition to being required by Missouri law, is very important for helping to assure that the sexual partners of these cases are identified, properly evaluated, and treated as necessary.

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*Assistance in the preparation of this article was provided by Dan Mallow, Kathy Branson, Amy Barnhart, Richard Knaup, and Melba Lunceford.*

## The Authors

The authors are from the Missouri Department of Health in Jefferson City, Missouri. **Robert Hamm, MD, MPH,** is a medical epidemiologist in the Office of Epidemiology. **H. Denny Donnell, Jr., MD, MPH,** is the state epidemiologist and director of the Office of Epidemiology. **Bill Huber** is chief of the Bureau of STD/HIV Prevention.

**Reprint requests to:**

**Dr. Robert Hamm**
**Office of Epidemiology**
**Missouri Department of Health**
**1730 East Elm Street, P.O. Box 570**
**Jefferson City, Missouri 65102**

# Computer Vision Procedures for Medical Imaging

Ronald J. Stanley, BS and James Keller, PhD

As health care professionals and interested medical observers, there may be some curiosity with how quality medical images are obtained. Medical image quality is important because important decisions, diagnoses, and medical breakthroughs are often dependent on what is contained within a medical image. Medical images may reflect anatomical structures as is the case for roentgenograms, computerized tomography (CT), and magnetic resonance images (MRI). Other medical images may reflect physiological processes and facilitate organ function study and diagnosis. In order to account for the myriad of purposes for medical images and the many medical image types, there are common computer vision procedures which are used to capture the initial image and generate an image that physicians, radiologists, and other healthcare professionals can rely upon to provide accurate interpretations of medical conditions.

The first step in the computer vision process is sensing the image. Sensing devices are used to acquire and to visualize the image. Several examples of the acquired images include roentgenogram, CT, and MRIs which were mentioned previously. Two common techniques for acquiring an image are: 1) using a digital camera or recording device, and 2) scanning an image from a regular camera image. The computer vision process depends on the ability to acquire high quality images. Figure 1 contains two chromosome images which are excerpted from a metaphase spread. The metaphase spread is captured as digital values of light intensities by a digitizing camera attached to a microscope.

The second computer vision step involves preprocessing of the sensed image. Preprocessing involves standard operations which can be performed on any image and provides for the capability to correct for the shortcomings of the imaging system. Some shortcomings may include noise or unwanted dots in the acquired image or an unfocused image. Notice the "dot noise" on the chromosome image in Figure 1. Standard image preprocessing operations involve smoothing, sharpening, and noise removal from the acquired image. In order to illustrate image preprocessing, compare the acquired image in Figure 1 to the images in Figures 2a and 2b. Figure 2a contains the chromosome images after applying a point-wise noise removal algorithm. Along with the elimination of unwanted dots, minor image smoothing is provided which also detracts from the detail of the image. Figure 2b is a sharpened image of Figure 2a. The sharpened image in Figure 2b is intended to improve the image visual quality.

After preprocessing operations the first step to image analysis utilizes segmentation. Segmentation simply means locating regions within an image which share some common characteristics. For example, the chromosome image in Figure 1 can be segmented on the basis of color. The chromosome color is different from the background. Thus, the chromosome can be segmented from its background. Additionally, suppose that there is not one but 46 chromosomes. Segmentation can be used to segregate all 46 chromosomes from the background as well as separate the chromosomes from each other. Segmentation is similar to the process physicians use when disseminating the black background of an roentgenogram from the relevant body structure shown in white.

The next computer vision step is to extract features based on the segmented image. A feature could be any characteristic of an object or an image. For the chromosome images shown, some important features include the chromosome length and the density profile along the medial axis of the chromosome. Figure 3a shows a medial axis superimposed on one of the chromosomes from Figure 1, and Figure 3b displays the density profile along this medial axis. The density profile provides the light intensity value for every picture element along the medial axis. Other important features for any medical image object are the shape of the boundary or edges and the object's texture, which can be computed automatically from the image.

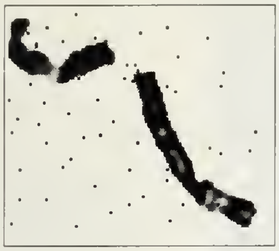

Figure 1. Chromosome with noise.

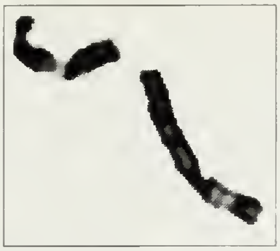

Figure 2a. Chromosome image with noise removed.

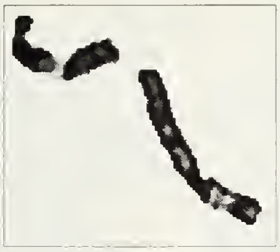

Figure 2b. Sharpend chromosome image.

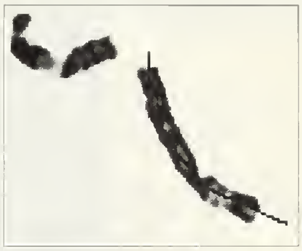

Figure 3a. Chromosome image with medial axis shown.

Following feature extraction, pattern recognition is performed on the images. Based on the image features, techniques are utilized to associate the image features with some known category or pattern. The features previously described for the chromosome image in Figure 1 can be used to help determine the chromosome number, the known category of interest. Three common pattern recognition techniques implement statistical methods, neural networks, and fuzzy logic. These methods attempt to provide high quality decisions about how the image features should be categorized. Neural networks and statistical methods have been used to categorize chromosomes into chromosome number based on the chromosome features. Because of the uncertainty present in medical images, the Medical Informatics Group at the University of Missouri-Columbia is currently investigating the application of fuzzy logic for improved decision making in chromosome karyotyping and abnormality detection.

The final step in the computer vision process is interpretation of the processed image. The purpose of the computer vision process is to provide the image user, the healthcare professional, with lucid, qualitative information to permit informed decision making. With the processed image, the healthcare professional can perform several useful operations to facilitate informed decision making. Some useful image operations include region enlargement, rotation, and transmission to other sites. For the case of an roentgenogram, the physician can enlarge the portions that are of particular interest. The physician can also rotate the roentgenogram to view the image from more advantageous perspectives. Finally, the physician can transmit the image to other locations so that other physicians can view the roentgenogram. Consequently, the images provided to healthcare professionals must be high quality and non-distorting to facilitate an accurate assessment. Although the computer vision process is intended to assist those who use medical images, there are always inherent risk factors in interpreting an image. Current technological advances for higher quality images are increasing the interpretative capability of those images.

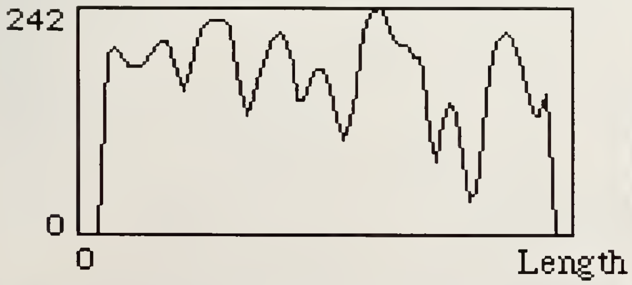

Figure 3b. Density profile of medial axis from Figure 3a.

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## Acknowlegment

This article was supported in part by grant number LM07089 from the National Library of Medicine. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the National Library of Medicine.

## The Authors

**Ronald J. Stanley** is a pre-doctoral fellow in Medical Informatics at the University of Missouri-Columbia.

**James Keller** is a professor in the Department of Electrical and Computer Engineering and holds the E. A. Logan Research Professorship in the College of Engineering at the University of Missouri-Columbia.

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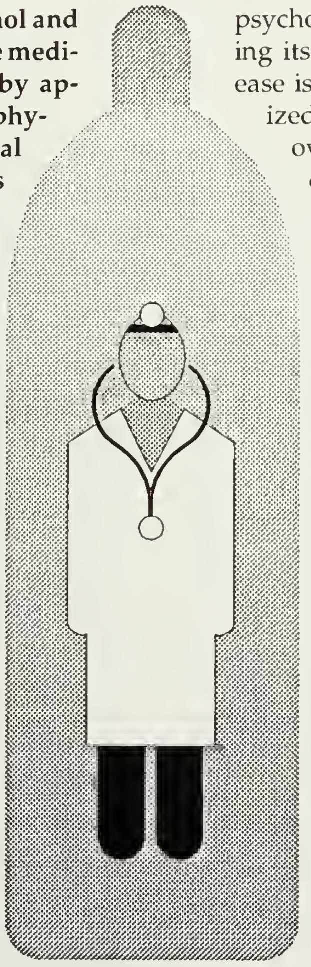
# Substance Abuse and Dependence in Physicians: An Overview of the Effects of Alcohol and Drug Abuse

George M. Bohigian, MD, Jack L. Croughan, MD, Karen Sanders, RN

**Substance abuse and dependence (alcohol and drugs) are behavioral disorders and treatable medical diseases. Early intervention followed by appropriate treatment can often help return physicians to healthy personal and professional lives. Current scientific evidence suggests the prevalence of substance abuse or dependence among the medical profession over a lifetime is approximately 10-15%, slightly in excess of the general population. The initiation of intervention is critical and ultimately may be lifesaving.**



Ten to 15% of all physicians will experience substance abuse or dependence at some point during their lifetime.[1,2,3,4] As a consequence, there is a high potential for adverse effects on their clinical practices, themselves, and their families. Despite these findings, there continues to be difficulty within the medical community in understanding and accepting the concept of substance abuse and the treatability of this primary disease entity.

The purpose of this paper is to examine and review the definition of substance abuse and dependency, summarize data of incidence and lifetime prevalence, discuss possible etiologies and factors contributing to the development of these disorders, and describe the effectiveness of the management and rehabilitation of chemical dependency in physicians. A subsequent article will describe the Missouri Physicians' Health Program, which has the responsibility of dealing with physician health, impairment and rehabilitation in Missouri.

## DEFINITION OF SUBSTANCE ABUSE AND DEPENDENCE

The American Medical Association and the American Psychiatric Association define alcoholism as follows: Alcoholism is a primary, chronic disease with genetic, psychosocial, and environmental factors influencing its development and manifestations. The disease is often progressive and fatal. It is characterized by continuous or periodic impaired control over drinking, preoccupation with the drug alcohol, use of alcohol despite adverse consequences, and distortions in thinking, most notably denial.[5,6] A glossary of terms used in this article appears at the end of this article. *A similar definition for drug abuse and dependence could be generated simply by substituting the word "drug" for alcohol in the above definition.* A more complete definition is included in the section on diagnosis.

## INCIDENCE AND PREVALENCE

Well-established physician health programs in existence for 10 years or more, such as in the states of New Jersey and Florida, have reported an incidence rate of approximately 1% per year of the licensed physician population.[1,2,7,8] A review of the literature in regard to lifetime prevalence of substance abuse and dependence in physicians shows a wide variation in the reported number of physicians affected with this disease.[3,4] The exact incidence is difficult to ascertain because statistical sources for estimates on physicians are conducted in a number of ways, including anecdotal reports, case studies, physician use in treatment services, hospital admission statistics, license and disciplinary actions, surveys, etc. There is a portion of the physician population who seek treatment on a private basis, outside of major treatment centers, and separate from any of the organized state programs for impaired physicians. There are also other physicians who will never receive treatment and who are not reflected in any of these numbers reported. Random surveys of a given physician population are difficult to evaluate in terms of accuracy

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*"There is a higher incidence of alcohol abuse in higher socioeconomic groups than in lower levels."*

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since there is no effective way to account for denial as an inherent part of the diseases of substance abuse and dependence.

Rates for the general population as a whole over a lifetime are reported at approximately 13% for alcohol abuse or dependency and this may serve as some indication that physicians would experience at least a similar rate.[3,4] Selected studies report a higher prevalence of alcohol use among physicians, but this may be due to socioeconomic class.[9] There is a higher incidence of alcohol abuse in higher socioeconomic groups than in lower levels. There is also a higher incidence in males than females. Anesthesiologists have the highest incidence of substance abuse of any specialty, especially abusing fentanyl.[4]

## ETIOLOGY/ASSOCIATED FACTORS

Genetic, psychosocial, and environmental factors influence the development and manifestations of substance abuse and dependence. These diseases appear to be genetically transmitted, but may skip generations.[10,11] Availability and relief of stress are frequently cited as contributing factors. Influences of upbringing are also often described as teaching potential physicians that it is not acceptable to express negative feelings, and subsequent emotional suppression leads to multiple failures in resolving conflicts. There are also five other risk factors believed to be unique to physicians as special influences that lead to subsequent physician impairment:[12]

1. **Physical and professional demands of being in medical practice, including long working hours, sleep deprivation, social isolation, and making life and death decisions about patient care;**
2. **Physician personality traits which include obsessive, workaholic personalities;**
3. **Easy access to prescription drugs, leading to self-medication, and the belief of personal invulnerability to addiction;**
4. **A conspiracy of silence and loyalty of friends, family, co-workers, and patients enabling problematic behavior to remain unchecked, but also unconfronted;**
5. **Unrealistic expectations of the physician and the physician's family by other physicians, co-workers, patients, and society.**

## DIAGNOSIS

*Denial, a hallmark of the disease, makes diagnosis difficult for physicians.* Healthcare professionals are characterized by malignant denial which may not crack for an extended period of time following treatment. A good history is paramount in making a diagnosis.

Evidence or history of trauma is important.[13] Marital or family difficulties, an inconsistent work history, emotional difficulties, defensiveness, or a cavalier attitude toward drinking or use of alcohol should arouse suspicion. This cavalier attitude may include drinking while on duty prior to going to the hospital, or drinking while using the telephone.

Laboratory tests may be helpful: 1) Hematologic testing may show a raised mean corpuscular volume or mean corpuscular hemoglobin. 2) Liver function test may show elevated gamma glutamyl transferase (GGPT); serum cholesterol or uric acid levels may be elevated. 3) Blood alcohol levels of 0.08 mg per dl (deciliter) of alcohol obtained in an emergency room setting following trauma or a motor vehicle accident or physical altercation may have a very strongly positive correlation with a diagnosis of substance abuse or dependence. Urine drug screening may often also provide useful information as an objective fact about substances the physician has ingested, but which he or she previously may have denied having taken. 4) Difficult to control hypertension.

Because direct questioning concerning the use of drugs and alcohol often causes defensiveness, questionnaires such as the CAGE and the Michigan Alcohol Screening Test (MAST) have been developed to screen for possible drug and alcohol abuse and dependency. (Tables 1 and 2)[14, 15] Their usefulness may be limited because of denial, however.

The specific diagnostic criteria and differentiation for substance *abuse and dependence* according to the *American Psychiatric Association's Diagnostic and Statistical Manual* Third Edition, Revised, are outlined in Table 3 (page 236).[6]

**Table 1. CAGE Questionnaire**

**C.** Have you ever felt you should **cut down** on your drinking?
**A.** Have you ever felt **annoyed** by criticism of your drinking?
**G.** Have you ever had a **guilty** feeling about drinking?
**E.** Have you ever taken a morning **eye opener**?

A positive response to two questions suggests alcoholism. Likelihood increases with additional affirmative responses.

*The diagnosis of chemical dependency is not necessarily linked to the amount, frequency, or kind of drug or alcohol consumed.* In general, a can of beer, a shot of whiskey, (1.5 oz. 80 proof spirits) and a glass of wine (5 oz.) are equivalent in the amount of ethanol in each.[16]

*The effects of the individual's drinking and/or drug use on the major areas of his or her life are keys to the diagnosis.* The incidence of moving violations such as driving under the influence, consequences associated with using, build-up of tolerance, changes in personality, and the presence of blackouts are useful pieces of information during the evaluation.

Critical to any evaluation and diagnosis of chemical dependency is the information obtained from other individuals in the physician's life. Input from family members, practice partners, office staff, and others will usually reveal the true extent of the physician's drinking or use. Denial and rationalization are so prevalent in this disorder that an accurate diagnosis based solely on self-report is often difficult to achieve.

> ***"Healthcare professionals are characterized by malignant denial ... "***

It is important that the evaluator be knowledgeable about the dynamics associated with diagnosing substance abuse and dependence in physicians. The evaluator should have no personal or professional connection to the physician as this could bias a diagnosis and lead to inaccuracies.

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**Table 2. Michigan Alcoholism Screening Test**

| | Points | |
|---|---|---|
| | Yes | No |
| 1. Do you feel you are a normal drinker? | 0 | 2 |
| 2. Have you ever awakened in the morning after drinking and found that you could not remember part of the evening before? | 2 | 0 |
| 3. Does your spouse (or parent) ever worry or complain about your drinking? | 1 | 0 |
| 4. Can you stop drinking without a struggle after one or two drinks? | 0 | 2 |
| 5. Do you ever feel bad about your drinking? | 2 | 0 |
| 6. Do friends and relatives think you are a normal drinker? | 0 | 2 |
| 7. Do you ever try to limit your drinking to certain times of the day or certain places? | 0 | 0 |
| 8. Are you always able to stop drinking when you want to? | 0 | 2 |
| 9. Have you ever attended a meeting of Alcoholics Anonymous? | 5 | 0 |
| 10. Have you ever gotten into fights when drinking? | 1 | 0 |
| 11. Has drinking ever created problems between you and your spouse? | 2 | 0 |
| 12. Has your spouse (or other family member) ever gone to anyone for help about your drinking? | 2 | 0 |
| 13. Have you ever lost friends or a girlfriend or boyfriend because of drinking? | 2 | 0 |
| 14. Have you ever gotten into trouble at work because of drinking? | 2 | 0 |
| 15. Have you ever lost a job because of drinking? | 2 | 0 |
| 16. Have you ever neglected your obligations, family, or work for two or more days in a row because you were drinking? | 2 | 0 |
| 17. Do you ever drink before noon? | 1 | 0 |
| 18. Have you ever been told you have liver trouble? | 2 | 0 |
| 19. Have you ever had delirium tremens (DTs) or severe shaking, heard voices, or seen things that were not there after heavy drinking? | 2 | 0 |
| 20. Have you ever gone to anyone for help about your drinking? | 5 | 0 |
| 21. Have you ever been in a hospital because of your drinking? | 5 | 0 |
| 22. Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital and drinking was part of the problem? | 2 | 0 |
| 23. Have you ever been seen at a psychiatric or mental health clinic or gone to a doctor, social worker, or clergyperson for help with an emotional problem in which drinking played a part? | 2 | 0 |
| 24. Have you ever been arrested, even for a few hours, because of drunken behavior? | 2 | 0 |
| 25. Have you ever been arrested for drunken driving or driving after drinking? | 2 | 0 |

*A score of 4 points suggests alcoholism; 5 or more indicates alcoholism.

## Table 3 - Diagnostic Criteria for Substance Abuse and Dependence

The diagnostic criteria for substance abuse and dependence according to the *American Psychiatric Association's Diagnostic and Statistical Manual* Third Edition, Revised, are as follows.

**I. Diagnostic Criteria for Substance *Dependency***
To be alcohol dependent (or dependent on any drug) a person must demonstrate at least three of the following:

1) Substance often taken in larger amounts or over a longer period than the person intended.
2) Persistent desire or one or more unsuccessful efforts to cut down or control substance use.
3) A great deal of time spent in activities necessary to get the substance (e.g., theft), taking the substance (e.g., chain smoking), or recovering from its effects.
4) Frequent intoxication or withdrawal symptoms when expected to fulfill major role obligations at work, school, or home (e.g., does not go to work because hung over, goes to school or work "high," intoxicated while taking care of his or her children), or when substance use is physically hazardous (e.g., drives when intoxicated).
5) Important social, occupational, or recreational activities given up or reduced because of substance use.
6) Continued substance use despite knowledge of having a persistent or recurrent social, psychological, or physical problem that is caused or exacerbated by the use of the substance (e.g., keeps using heroin despite family arguments about it, cocaine-induced depression, or having an ulcer made worse by drinking).
7) Marked tolerance; need for markedly increased amounts of the substance (i.e., at least a 50% increase) in order to achieve intoxication or desired effect, or markedly diminished effect with continued use of the same amount.

**Note:** The following items may not apply to cannabis, hallucinogens, or phencyclidine (PCP):

8) Characteristic withdrawal symptoms (see specific withdrawal syndromes under Psychoactive Substance-induced Organic Mental Disorders).
9) Substance often taken to relieve or avoid withdrawal symptoms. Some symptoms of the disturbance have persisted for at least one month, or have occurred repeatedly over a longer period of time.

**Criteria for Severity of Psychoactive Substance Dependence:**
**Mild:** Few, if any, symptoms in excess of those required to make the diagnosis, and the symptoms result in no more than mild impairment in occupational functioning or in usual social activities or relationships with others.
**Moderate:** Symptoms or functional impairment between "mild" and "severe."
**Severe:** Many symptoms in excess of those required to make the diagnosis, and the symptoms markedly interfere with occupational functioning or with usual social activities or relationships with others.
**In Partial Remission:** During the past six months, some use of the substance and some symptoms of dependence.
**In Full Remission:** During the past six months, either no use of the substance, or use of the substance and no symptoms of dependence.

**II. Diagnostic Criteria for Psychoactive Substance *Abuse***

A. A maladaptive pattern of psychoactive substance use indicated by at least one of the following:
    1) Continued use despite knowledge of having a persistent or recurrent social, occupational, psychological, or physical problem that is caused or exacerbated by use of the psychoactive substance.
    2) Recurrent use in situations in which use is physically hazardous (e.g., driving while intoxicated).
B. Some symptoms of the disturbance have persisted for at least one month, or have occurred repeatedly over a longer period of time.
C. Never met the criteria for Psychoactive Substance Dependence for this substance.

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## MANAGEMENT AND THERAPY

It is important to recognize early warning signs and to intervene at the onset of problematic behavior involving drugs and alcohol. Early intervention and confrontation are important tools.

In the past, there were two precepts that were accepted as gospel. 1) Before the alcoholic/addict can be helped he or she must reach the bottom, and; 2) The alcoholic/addict cannot be helped until he or she is willing to be helped. *This is no longer the current management theory.* Early intervention is now the accepted standard in the treatment field. The intoxicated brain does not conceive or recognize the state of ill health.

There are several important elements that are required if confrontation with the sick physician is to succeed.[17]

1. *Specific, well-documented evidence.* Intervention cannot be based on only rumor or hearsay. Solid evidence with dates, times, places, and events that spell out clearly the existence of the problem is essential. It should be evidence that the physician cannot refute or rationalize. Here again, the conspiracy of silence must be broken. Family members, fellow physicians, and co-workers must accept the responsibility to speak out about the reality of what is happening in the physician's life.

2. *Intervention.* An intervention team composed of appropriate and meaningful members should ideally include a respected peer, a recovering physician with whom the confrontee can identify, a member of the impaired physician's program, someone in an authority role who can present consequences if help is not sought, and if appropriate, a member of the physician's family or a close friend.

> ***"The initiation of an intervention may be the most important and ultimately lifesaving act that you could do for a friend, colleague or family member."***

3. *Non-judgmental approach.* The intervention team must come across as supportive, with the concept of the physician as impaired because of an illness.

4. *Understanding of the denial mechanism.* The team members must be skilled in breaking through the defense of denial, leading the sick physician toward an understanding and acceptance of the need for an evaluation and possible treatment. This requires that the confrontation be planned carefully and rehearsed thoroughly by the team members.

5. *An appropriate evaluation and treatment plan.* It is essential that the plan include suitable options for the evaluation and treatment of the suspected problem. The leader of the intervention team should be ready and able to present to the physician-patient the proper plan once accepted by the physician.

6. *Clout.* A rigidly recalcitrant physician who refuses diagnosis and treatment, but who is obviously impaired poses a real risk, and appropriate leverage is required to impose stated consequences. An example of "clout" or leverage is the intervention team statement that the physician's admitting privileges may be suspended or their participation in joint clinical practice may be in jeopardy. In egregious cases, a threat to notify one of the licensing boards may be necessary. Used properly, this is the most effective manner for the unwilling physician to accept appropriate treatment.

**Table 4 - Elements of Modern Inpatient Programs**

1. Detoxification from alcohol and drugs.
2. Monitored abstinence from mood altering agents.
3. Treatment of current medical ailments.
4. Positive health habits in diet, exercise, sleep.
5. Participation in supervised group and community therapy.
6. Diagnostic evaluation and self revelation.
7. Evaluation and intervention with the family.
8. Mediation with the employer and authorities.
9. Introduction to Alcoholics or Narcotics Anonymous.
10. Short term limited objective counseling.
11. Instruction in short term recovery skills.
12. Discharge planning and continued aftercare.

7. *Tie up loose ends.* Time off from the practice, practice coverage, insurance benefits for treatment, and resources for the family should all be addressed at the completion of the intervention. Documentation of the intervention process should be done immediately.

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***"Recovery in physicians is approximated to be 80% versus 50% in the general population."***

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Recovery-oriented multi-disciplinary treatment programs which have continued abstinence as a goal and introduce the individual to a 12-step program, such as Alcoholics Anonymous or Narcotics Anonymous have become the dominant form of treatment for chemical dependency. The elements of such a program are listed in Table 4.

Most experts in the field agree that inpatient treatment is crucial, especially for detoxification. A reputable treatment facility is essential and should be one that has experience with treating physicians. Inpatient treatment is extremely expensive, averaging approximately $20,000 for a typical stay of 30 days. Outpatient treatment following detoxification is becoming the norm as managed care plays a role in deciding what treatment will be covered by insurance.

Physicians in recovery need to attend AA meetings and to have a sponsor. Ongoing monitoring and treatment planning should be included in aftercare plans as the physician looks toward discharge from treatment. Monitoring should be arranged through the state impaired physician program. Referral to health care professional support groups is beneficial as part of aftercare plans.

Return to work plans include facilitating a supportive work environment as well as laying out written expectations for ongoing recovery. A "relapse contract" should be part of discharge planning. The presence of relapse contracts allows differentiation of *slip* versus *relapse* versus *treatment failure*. This also defines therapeutic measures to be taken if use of alcohol or other substance abuse occurs. Details of an aftercare program must be explicit. Individual psychotherapy is often utilized as a part of aftercare plans.

Medical licensure laws vary from state to state. In many states it is necessary to report addiction to the state board. Some states grant immunity if the physician involved enters a treatment program.

## RECOVERY

Recovery rates are typically higher in physicians than the general population. Recovery in physicians is approximated to be 80% versus 50% in the general population.[18,8] The higher recovery rate in physicians is believed to be due to returning to a productive employment and participation in a monitored program of recovery.

## CONCLUSION

Substance abuse and dependence are behavioral disorders and treatable medical diseases which in the absence of effective treatment can be fatal. Current scientific evidence suggests the prevalence of substance abuse or dependence among the medical profession is approximately 10-15%, over a lifetime slightly in excess of that of the general population. Early intervention followed by appropriate treatment and follow-up often help return physicians afflicted with substance abuse and dependence to healthy personal and professional lives. The initiation of an intervention may be the most important and ultimately lifesaving act that a person could do for a friend, colleague or family member.

## Acknowledgement

The authors would like to acknowledge G. Douglas Talbott, MD (Atlanta, GA); Richard M. Steinhilber, MD (Cleveland, OH); Christie S. Bohigian (St. Louis, MO); Paula Oye (St. Louis, MO) for their technical assistance and review of this article.

**Editor's Note:** Dr. Bohigian's interest in this article was stimulated by helping organize a colleague's intervention.

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## GLOSSARY

**Abstinence:** Cessation of use of a psychoactive substance previously abused or upon which the user has developed drug dependence.

**Adverse consequences:** Are alcohol-related problems or impairments in such areas as: physical health (e.g. alcohol withdrawal syndromes, liver disease, gastritis, anemia, neurological disorders); psychological functioning (e.g. impairments in cognition, changes in mood and behavior); interpersonal functioning (e.g. marital problems and child abuse, impaired social relationships); occupational functioning (e.g. scholastic or job problems); and legal, financial, or spiritual problems.

**Chemical Dependence:** Generic term relating to psychological or physical dependence, or both, on an exogenous substance.

**Denial:** Is used here not only in the psychoanalytic sense of a single psychological defense mechanism disavowing the significance of events, but more broadly to include a range of psychological maneuvers designed to reduce awareness of the fact that alcohol use is the cause of an individual's problems rather than a solution to those problems. *Denial* becomes an integral part of the disease and a major obstacle to recovery.

**Disease:** Means an involuntary disability. It represents the sum of the abnormal phenomena displayed by a group of individuals. These phenomena are associated with a specific common set of characteristics by which these individuals differ from the norm, and which places them at a disadvantage.

**Impaired control:** Means the inability to limit alcohol use or to consistently limit on any drinking occasion the duration of the episode, the quantity consumed, and/or the behavioral consequences of drinking.

**Often progressive and fatal:** Means that the disease persists over time and that physical, emotional, and social changes are often cumulative and may progress as drinking continues. Alcoholism causes premature death through overdose, organic complications involving the brain, liver, heart and many other organs, and by contributing to suicide, homicide, motor vehicle crashes, and other traumatic events.

**Preoccupation:** In association with alcohol use indicates excessive, focused attention given to the drug alcohol, its effects, and/or its use. The relative value thus assigned to alcohol by the individual often leads to a diversion of energies away from important life concerns.

**Primary:** Refers to the nature of alcoholism as a disease entity in addition to and separate from other pathophysiologic states which may be associated with it. *Primary* suggests that alcoholism, as an addiction, is not a symptom of any underlying disease state.

**Recovery:** A process of overcoming both physiological and psychological dependencies on a drug or alcohol.

**Rehabilitation:** The restoration of an optimal state of health by medical, psychological, social and peer group support for a chemically dependent person and his or her significant other.

**Relapse:** Recurrence of alcohol or other drug dependent behavior in an individual who has previously achieved and maintained abstinence for a significant time beyond the period of detoxification.

**Slip:** Defined as one episode of drinking during recovery.

**Sobriety:** Generally refers to the state of complete abstinence from alcohol and other drugs or abuse in conjunction with a satisfactory quality of life.

**Treatment:** Application of planned procedures to identify and change patterns of behavior that are maladaptive, destructive.

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## The Authors

**George M. Bohigian, MD,** is in private practice and is a Professor of Clinical Ophthalmology, Department of Ophthalmology and Visual Sciences Washington University School of Medicine/Barnes Hospital, St. Louis, Missouri. **Jack L. Croughan, MD,** is the Medical Director of Missouri Physicians Health Program. **Karen Sanders, RN,** is the coordinator of Missouri Physicians Health Program.

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# PERSONAL WATERCRAFT INJURIES: Experience at a Community Hospital

by Roger A. Francis, MD and Roland Vize, RN, CEN

**A 16-month retrospective review was performed of patients brought to Lake of the Ozarks General Hospital Emergency Department for treatment of injuries suffered in personal watercraft accidents. Fourteen of 37 patients showed clinical and radiographic evidence of fractures or internal injuries. Personal watercraft accidents are a significant cause of morbidity in a lake resort community population.**

Aquatic related accidents due to boating, water skiing and diving have long been recognized as significant sources of morbidity and mortality in areas bordering our nation's lakes, rivers and streams.[1,2] Since their introduction over ten years ago, motorized personal watercraft have shown an explosion in popularity and availability throughout the country. With widespread use of these vehicles has come the expected proliferation of injuries associated with accidents.

Personal watercraft are small, gasoline engine powered vehicles which typically accomodate a single rider, although later models may allow two or more passengers. Although multiple manufacturers and brand names of personal watercraft exist, there are two basic types. Jet skis are vehicles in which the rider either stands or kneels on a flat surface while holding handle bars. Waverunners have seats which are straddled while holding the handle bars, similar to a motorcycle. Both types of watercraft are capable of high speeds and sharp turns, which are factors that contribute to the frequency of accidents and injuries.

The purpose of the study was to determine the frequency of injuries associated with personal watercraft accidents, as well as to determine the mechanism and types of injuries.

## METHOD

To evaluate the mechanism and extent of these injuries, we have reviewed medical records and imaging studies of patients presenting to the emergency department of Lake of the Ozarks General Hospital over a 16-month period, from Spring, 1991 through Fall, 1992. Charts were reviewed for the following data: 1) patient name, age, sex, and date of emergency department visit, 2) type of personal watercraft involved, 3) mechanism of injury and 4) nature of injuries, including clinical and imaging data.

Lake of the Ozarks General Hospital is a 90 bed, not for profit community hospital located on the eastern shore of Lake of the Ozarks, one of the oldest and largest man-made lakes in America. With over 1,300 miles of shoreline, the lake attracts visitors from throughout the midwest, chiefly for water related activities such as fishing, swimming, pleasure boating, water skiing, parasailing, etc.

## RESULTS

### Epidemology

Thirty-seven patients from personal watercraft accidents were seen at the Lake of the Ozarks General Hospital Emergency Department between June 1, 1991 and October 4, 1992. Sex distribution was 23 male (62%) and 14 female (38%). Ages ranged from 3 to 48 years, with mean of 20.7 years and median of 17 years.

### Mechanism of Injury

Twenty-three of the patients were injured in accidents related to jet skiis, and 14 were in waverunner accidents. Of the 37 patients, 18 (48.6%) were injured by being thrown from the vehicle, or falling and striking a portion of the vehicle they were riding. The remaining 19 (51.4%) were injured when their vehicle struck another object. These "objects" included another personal watercraft (11), a boat (3) and a dock (5). Both types of personal watercraft showed equal distribution of these injury mechanisms.

### Extent of injury

Of the 37 patients, 23 (62%) suffered injuries which were limited to lacerations, contusions or sprains. Of the remaining 14 patients, 10 showed evidence of fracture without internal injury (see Table 1). Of these 10 patients, 5 were riding jet skis and 5 were riding waverunners. Four patients showed clinical and radiographic evidence of internal injury.

Continued on page 242

Table 1 -
Distribution of fractures in 10 patients

| Fracture | # Patients |
|---|---|
| Rib | 2 |
| Femur | 2 |
| Pelvis | 2 |
| Tibia | 2 |
| Fibula | 1 |
| Skull | 1 |
| Clavicle | 1 |
| Patella | 1 |

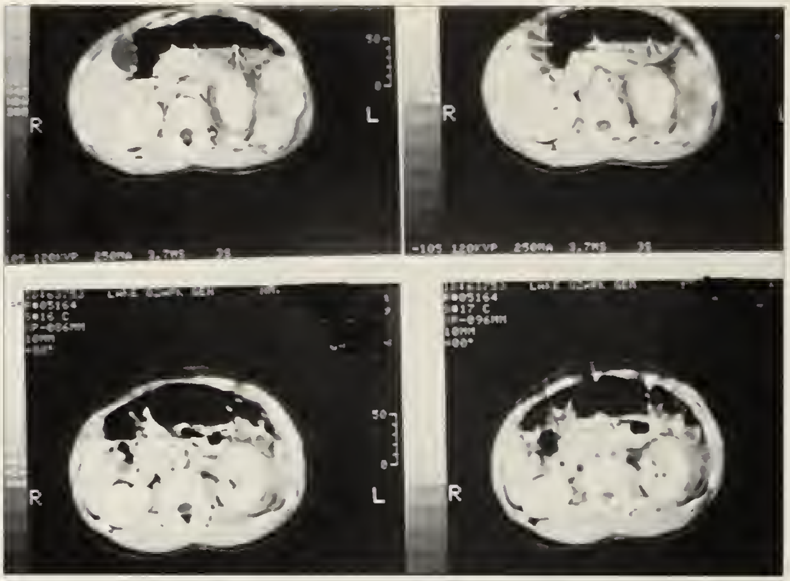

**FIGURE 1: Upper abdominal CT scan shows hemoperitoneum, splenic laceration and subcapsular hematoma of left kidney.**

Continued from page 241

## Patient 1

A 12-year-old boy riding a jet ski was struck by another jet ski. The patient was transported to the emergency room by ground ambulance. On arrival, vital signs included BP 116/72, Pulse 79 and Respirations of 20. The patient was alert, and complained of pain in left ribs and left femur. On examination, abrasions were noted in the left lateral chest. Crepitation was present over left lower ribs, and breath sounds were diminished over the left lung base. The abdominal exam showed tenderness and guarding over the left upper quadrant. Examination of the extremities showed deformity of the proximal left femur. A foley catheter was inserted and showed grossly bloody urine. Initial radiographs showed fractures of the left 9th, 10th, 11th and 12th ribs as well as a displaced fracture of the proximal shaft of the left femur. A CT scan of the abdomen performed during intravenous injection of meglumine diatrizoate contrast medium showed hemoperitoneum, splenic laceration and subcapsular hematoma of the left kidney (Fig 1). The patient was transferred to the University of Missouri Hospital and Clinics in Columbia.

## Patient 2

An 18-year-old man was riding a jet ski, and struck his anterior neck on the handle bars. On arrival in the emergency room, the patient was complaining of breathing difficulty, hoarseness and pain in the anterior neck. Vital signs included BP 154/90, Pulse 104 and Respirations 16. Physical examination showed edema and erythema of the anterior neck and upper chest. There was slight crepitation about the larynx and anterior neck. Breath sounds were present over both lungs. An AP chest radiograph (Fig 2) showed subcutaneous emphysema throughout the neck as well as moderate pneumomedi-astinum. Subcutaneous emphysema in the neck was confirmed by a lateral neck radiograph. The patient was transferred to the University of Missouri Hospital in Columbia with the diagnosis of laryngeal fracture. This was confirmed by laryngoscopy and subsequent surgical exploration.

## Patient 3

A 45-year-old woman was riding a jet ski and was struck by a boat as she tried to cross in front of it. On arrival in the emergency room, she complained of pain in the left shoulder, arm and chest. Vital signs included BP 132/90, Pulse 94 and Respirations 20. Examination of the chest showed moderate swelling and bruising over the left lower posterior ribs. There were decreased breath sounds over the left lung base. Lab values included greater than 50 RBC's per high power field on urinalysis. An upright chest film showed fractures of the left 8th-12th ribs posteriorly, as well as a small left apical pneumothorax. A CT scan of the abdomen during contrast injection showed normal liver and spleen with no evidence of hemoperitoneum. The left kidney showed a probable renal contusion and small subcapsular hematoma. The patient was admitted to the hospital, and did well on conservative management.

## Patient 4

A 35-year-old man was riding a waverunner and was struck by another waverunner. On arrival in the emergency room, the patient complained of severe pain in the right chest, right shoulder and right posterior thorax, as well as shortness of breath. Vital signs included BP 126/76, Pulse 84, and Respirations 20. On examination, there was echymosis and crepitus over right ribs laterally and posteriorly. Breath sounds on the right were decreased. A supine portable chest film shows fractures of the right 3rd through 10th ribs posteriorly, moderate right pneumothorax, and diffuse opacification of the

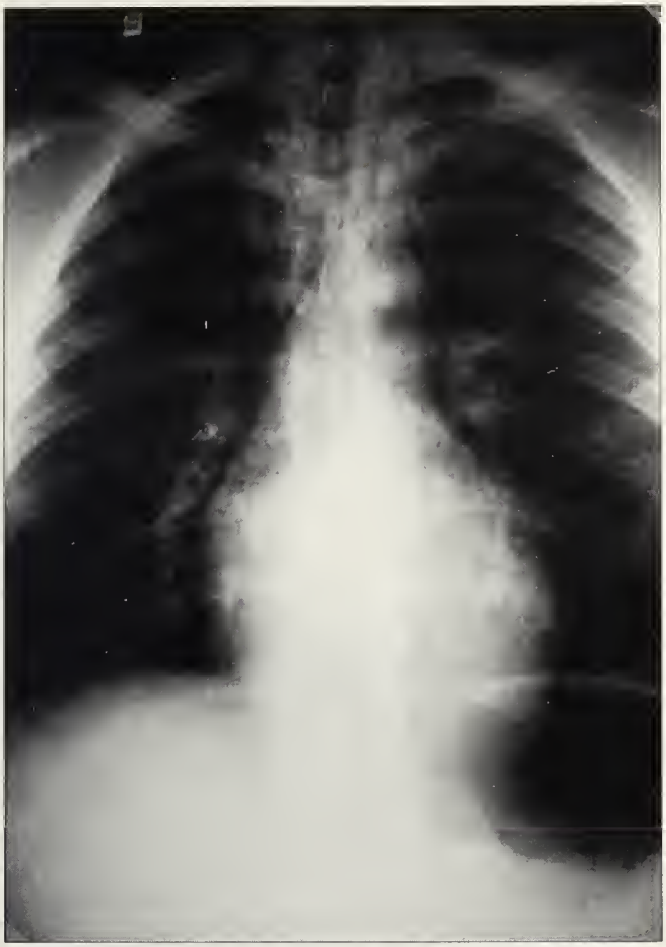

**FIGURE 2: An AP chest radiograph shows pneumomediastinum with subcutaneous emphysema extending into neck.**

right hemithorax consistent with hemothorax or lung contusion. Placement of a right chest tube yielded 500 cc of blood. Following further stabilization, the patient was transferred by helicopter to the University of Missouri Hospital and Clinics.

## DISCUSSION

A review of the literature showed no previous studies dealing with personal watercraft injuries. The current study is, therefore breaking new ground as related to these types of injuries. A limitation of the study is that the data probably does not represent the true incidence of personal watercraft injuries, since some injured patients may either not seek treatment or seek treatment at another facility. The data resulting from this study indicate several points. Firstly, that personal watercraft injuries are common (37 in 16 months). Moreover, during this period of 16 consecutive months, these injuries occurred only from early spring to late fall. Although not as common as boating injuries, we can expect the incidence of injuries from personal watercraft to increase with gaining popularity in their use. The fact that 24 of 37 patients were riding jet skis is probably reflective of the popularity of jet skis rather than any inherent danger of this type of watercraft. Secondly, a study of the mechanism of injury indicates that many accidents result from excessive speed, carelessness or a combination of both. As seen from the statistics, over half the accidents studied occurred when the vehicle struck another object, either a boat, dock or another personal watercraft. In observing personal watercraft on Lake of the Ozarks, it is apparent that certain activities are very popular. These include, a) following boats as closely as possible and jumping over wakes, and b) traveling at high speed toward another personal watercraft, and at the last second, veering away, sending a spray of water onto the other craft. Both these activities result in a large number of accidents.

Finally, study of the severity of injury showed that 14 of 37 (38%) suffered either fracture or evidence of internal injury. This high number may be attributed to multiple factors, including excessive speed, lack of restraint and lack of protection. Unfortunately, data regarding alcohol intake was not available in all patients. It is known that several patients were drinking prior to their accidents.

## CONCLUSION

This review shows that personal watercraft accidents are common and are a significant source of morbidity in a lake resort community. These injuries appear to be most common in adolescents and young adults. A study of the injury mechanism suggests that the majority are related to correctable factors, including lack of control over the watercraft. Excessive speed for water conditions is suspected in many accidents, although data regarding speed of craft involved in accidents is not available. Obviously, more study is needed to determine the effects of other factors, including surface conditions and alcohol intake. Perhaps as more information about personal watercraft injuries becomes available, education of users of these craft or change in design features may decrease the number of injuries.

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## The Authors

Roger Francis, MD, and Roland Vize, RN, CEN, are from the Lake of the Ozarks General Hospital, Osage Beach, Missouri.

**Reprint requests to: Dr. Roger Francis, 54 Hospital Drive, Osage Beach, MO 65065.**

PERSPECTIVES

# Microcomputer Management for Physicians

by Sidney A. Dulle, CPA

Physicians have for some time been aware of the vital role computers can play in the delivery of competent healthcare services, and in enhancing efficiency in the office. With greater reliance on such tools, it becomes more important than ever to protect the integrity of the information stored. Primary among any physician's concerns is to limit specific portions of patient and financial information accessible through and in the office computer system.

A modern physician practice incorporates microcomputers into the everyday office practice in an ever-widening range. Uses may include maintaining "the books" -- patient accounts receivables, accounts payable, inventory control and general ledger for the generation of financial statements. On-line helps, via modem, are available for diagnostics and expert evaluation assistance. Insurance coverage reimbursement requests and access to healthcare facility records are commonplace through computer link-ups. Future applications evolve almost daily. Software is readily available for all of these applications.

Regardless, however, of how "good" or "fast" your hardware is, or how sophisticated your software application may be, microcomputer systems will perform no better than the people using them. Training is integral to the overall success of your system. To be successful, management must be committed to making money and staff time available.

Once management commitment is made, a competent computer trainer should be enlisted to provide professional training. The training goals, objectives, benefits, scheduling, follow-up and fees should be in a clearly articulated engagement letter. Overshadowing all is the understanding that staff productivity is paramount.

Training course design will depend in large measure on the current level of computer literacy of those to be trained. An early evaluation of this level will predicate that training regimen. Oftentimes, trainers will employ questionnaires to assess this beginning level of understanding.

Depending upon the assessment, such as disruption of practice and staff routine, or interruption of training activities by telephone or management, training technique is determined. Very basic or introductory courses are generally best taught using a hands-on approach. More advanced applications for seasoned computer users may best be imparted using large-screen monitors, slides, or other non-direct methods.

Regardless of the level of training or techniques employed, the trainers should be required to provide a detailed training manual for reference following the formal training. This can be particularly helpful if much ground has been covered and 100% retention is not likely.

At the conclusion of the training course, the trainer should meet with management to review success and staffs' new level of proficiency. It may be that additional training is required at that time, or follow-up or refresher training discussed.

Location also must be considered. While on-site training may seem more convenient, it often poses problems. A physical lack of training space conducive to a good learning environment may also be evident in the office. An off-site location is usually more efficient in the long run.

A well-trained staff is now prepared to responsibly manage the practice's microcomputer system and implement measures to protect information integrity and access. Microcomputer security issues most often arise only after a breach, but a well-trained staff has many timely opportunities to be proactive in avoiding problems.

Security measures should be reviewed when--

- initial system is purchased;
- deficiencies are detected during an audit;
- data files are lost;
- suspected theft or misuse of data is evident;
- access to or from other computing systems is increased;
- personnel turnover.

Security measures to be pro-actively addressed by staff include the following:

### Organizational Structure

Lack of proper segregation of duties among personnel in a computer environment may present security problems. Files accessed by the improperly trained staff member can result in data being corrupted. Worse yet, sensitive and/or confidential information may be accessed, changed, and/or erased.

### Physical Access To Equipment

Controls should be available regarding who has physical access to the computer system. The most common method of providing computer security is to physically lock it using a key, and allowing only select personnel to have access to the key. Care also should be taken to limit who has access to the original software diskettes, blank checks and other paper stock that may be used in the practice.

### Physical Environment

Some areas are prone to power surges and brown outs. Such electrical interference can reek havoc with a computer system. Professionals can offer protective devices to minimize likelihood of data loss under such conditions.

### User Authentication

The most common authentication measure is the password, which most people tend to equate with security. These may be used at four levels: operating system, application system, program, and file. A careful evaluation of your practice needs and software employed can provide a basis for using this basic protective measure. One should be reminded that passwords are only one of the many security tools available and tend to become compromised with the passage of time.

### Software And Data Files

Menus are the most common control feature. If an option is not available on the menu selection screen, it is not likely that the less sophisticated computer user may inadvertently access sensitive or confidential information. Such protection can be quite helpful in a LAN (Local Area Network) environment.

### Backup And Recovery Policies

Backup procedures are designed to fit your needs and are imperative in today's world of multi-user access, power surges, outages, brown outs, and original program and outside network-accessed viruses. Once having experienced the cost and time surrounding the reconstruction of vital information, whether patient or financial, a lasting lesson will have been learned. Avoid the lesson.

### Sensitive Information

For highly sensitive information, removable hard disks may be the answer. When not in use, these storage devices may be locked up in an appropriate fireproof area or stored off-site.

### General Policies

Whatever policies and procedures you adopt within your practice, be sure to document! Security rules should be an important part of your employee policy manual. Password lists should be kept under lock and key. Do not learn the hard way-- be proactive in protecting your practice!

### The Author

**Sidney A. Dulle, CPA,** is the President of Dulle & Associates, P.C., Certified Public Accountants located in Jefferson City, Missouri.

This article is largely a compilation of information contained in the following publications:

*CPA MAS Management Advisory Services; Technical Consulting Practice Aid; Microcomputer Security; Microcomputer Training and Disaster Recovery Planning; American Institute of Certified Public Accountants*

**YOCON®**

**YOHIMBINE HCl**

**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

**How Supplied:** Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

**References:**

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## University of Missouri - Kansas City

Dr. Hamburger

**Stephen Hamburger, MD,** has been named director of primary and managed care services and associate executive director for Truman Medical Center. Dr. Hamburger had been associate dean for academic affairs since 1987. He is also chairman of the department of internal medicine at TMC.

Dr. Munro

**John S. Munro, MD,** is the new acting associate dean for academic affairs at UMKC Medical School. Dr. Munro served as director of resident training for the department of psychiatry and assistant dean of the first two years. He has held both positions since 1988. He is also the director of Consultation-Liaison Services for Western Missouri Mental Health Center.

**Linda Johnson, MD,** is the new assistant dean for selection. Dr. Johnson, an internist at the school since 1992, replaces **Katherine Smith, MD,** who will retire from the position this month. Dr. Smith has been an associate professor of pediatrics since 1976. She will continue to work assisting in the development and implementation of special programs for the Office of Medical Education and Research.

## St. Louis University

St. Louis University will be offering public health program classes in Kansas City. Courses sponsored jointly by St. Louis University and Rockhurst College will be taught at the Ignatius Center in the south Kansas City area beginning in August. The master of public health program consists of 36 credit hours with course work in public health administration, behavioral science, biostatistics, epidemiology and environmental/occupational health.

**Kenneth Smith Jr., MD,** professor of surgery and director of the division of neurosurgery, has received a one-year contract from Sterling Winthrop Inc. Dr. Smith is participating in a multicenter study testing the drug PEG-Superoxide Dismutase's use for the recovery from brain injuries.

## Washington University

Washington University is coordinating a new, 20 center study to determine whether reducing eye pressure with medication can prevent or delay glaucoma. The study, Ocular Hypertension Treatment Study (OHTS) is sponsored by the National Eye Institute of the National Institutes of Health. **Michael A. Kass, MD,** is the national study chairman and professor of ophthalmology and visual sciences. **Martin B. Wax, MD,** associate professor of ophthalmology and visual sciences, is the principal investigator of the Washington University clinical center. Volunteers between the ages of 40 and 80 years of age with elevated intraocular pressure and relatively good vision are needed for the study. Volunteers with advanced glaucoma are not eligible. Those currently using drops to lower intraocular pressure will be asked to stop before they are eligible to participate. In all, 1,500 ocular hypertensive patients around the U.S. will be enrolled in the study. They will be followed for at least five years. For information, call Arnold Jones, study coordinator, at (314) 362-4175.

The AIDS Clinical Trials Unit at Washington University is preparing to test three new classes of investigational drugs to determine their effectiveness in treating HIV infection. The unit hopes to enroll 80 to 100 people infected with HIV to test the drugs called protease inhibitors. For more information call 454-0058.

The National Cancer Institute is funding the a regional breast cancer tissue registry to be located at Washington University. Information gathered from regional registries will be pooled to create a national, computerized breast cancer tissue database. A team of investigators will enter information into the database for an estimated 8,000 tissue samples from seven area hospitals. In 1995 scientists will have access to the database, which will include patient information regarding tumor type, diagnosis, treatment and outcomes.

**Dwight C. Look, MD,** instructor of medicine, received a grant from the American Lung Association for a research project.

## University of Missouri-Columbia

The University of Missouri Medical Alumni Organization honored several MSMA members at their awards luncheon held in conjunction with the MSMA annual meeting in Kansas City.

**Bernard Ewigman, MD,** associate professor and director of research for the department of family and community medicine received The Outstanding Young Physician Award. The award is given to alumni under age 45 who have distinguished themselves in medicine.

**Patrick B. Harr, MD,** family physician and member of the medical staff at St. Francis Hospital in Maryville, MO, and **Horace Thomas, MD,** retired Columbia general surgeon, received Service Awards. Dr. Thomas was the Boone County Medical Society's Doctor of the Year for 1993.

The organization also honors individuals who are not MU alumni but have demonstrated a special interest in the school and the organization. **Michael C. Perry, MD,** professor in the department of internal medicine's division of hematology and oncology, and **Jerry W. Templer, MD,** professor of surgery in the division of otolaryngology and chief of the otolaryngology section at Harry S. Truman Memorial Veteran's Hospital, received Honorary Alumni Awards. Dr. Perry was recently named director of the division and appointed to the Nellie B. Smith Chair in Oncology.

Dr. Eggers

Dr. Shelden

**G.W.N. "Bill" Eggers, MD,** chairman of anesthesiology for nearly 25 years, has been named the first **Russell D. Shelden, MD,** Professor of Anesthesiology. Dr. Shelden, a well-known retired Kansas City anesthesiologist, and his wife, Mary, established a professorship fund in 1992 with an endowment pledge. In 1991, MU Alumni Association presented Dr. Shelden with its highest honor, the Distinguished Service Award. Dr. Eggers has long been a leader in the American Society of Anesthesiologists, serving as the society's president in 1991. In February he assumed a one-year term as president of the Academy of Anesthesiology. Dr. Eggers joined the MU faculty as an associate professor in 1961. As vice chairman of the Residency Review Committee on Anesthesiology for the Accreditation Council for Graduate Medical Education, Dr. Eggers has a powerful voice in the training of resident physicians nationwide. He is also a former chairman of the board of governors of the American College of Anesthesiologists. He is past president of the Society of Academic Anesthesia Chairmen.

He has also served as president of the Boone County Medical Society in 1988 and as president of the Missouri Society of Anesthesiologists in 1970.

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# Condom Ads Miss the Mark

by Robert Puchalski

**Rather than informing the whole nation about the benefits of condom use, policy should seek out the small, relatively high-risk populations that are the most heterosexually and homosexually active.**

The spread of sexually transmitted diseases throughout the world, and within our country in particular, should be of great interest to all of us, not only as physicians, but as Americans. Sexually transmitted diseases, from Chlamydia to AIDS, are among the largest and most pervasive of public health concerns. They particularly interest me because I feel that, through effective public health endeavors, much can be done to prevent their spread and existence. I am a firm proponent of safe sex and the regular use of condoms during sexual intercourse. Yet what I, and many others, are unsure of is the method with which public health policy should promote the use of condoms. Recently, the federal government began using television to advertise and support the use of condoms. In this media blitz, as John Leo of *US. News and World Report* puts it, "condoms are being pushed as consumer products, and by implication, recreational sex is being sold as a consumer item as well."

The real issue lies in whether advertising the use of condoms is beneficial to the public as a whole. The new condom ads are being targeted at the 18 to 25-year-old age group, yet every parent and former child knows that younger kids will hear about and somehow watch them (perhaps for good reason!). Some argue that it is the problem posing as the solution. They say that children are being overwhelmed with sexual messages from the moment they lose their pacifiers, and that the recent Mr. Rubber campaign is yet another factor that induces young people to have sex. Although I'm not sure how true this viewpoint is, I do agree that public health policy should attempt to concentrate its efforts. Rather than informing the whole nation about the benefits of condom use, policy should seek out the small, relatively high-risk populations that are the most heterosexually and homosexually active.

Here at Washington University, I am involved in a sex education program that attempts to do just that. Although it doesn't extend far beyond a local elementary school or an age group of 14, the program is effective in its approach. Rather than indiscriminately promoting the use of condoms, the program targets St. Louis school children and teaches them the benefits of safe sex before they acquire strong anti-condom mentalities. More importantly, however, the program promotes the employment of "abstinence" as the only sure way to prevent the contraction of an STD, not to mention early pregnancy. Keeping in mind the inevitable, students are encouraged to see physicians and get treated when they see any symptoms of an STD, especially since many STDs have their only reservoirs of infection within the human population. In this way, the children are given the entire message about STDs, the use of condoms, and the benefits of abstinence; rather than a transient message about condoms that may encourage their early sexual promiscuity.

I feel that most adults who act recklessly in their sexual practices regardless of whether they are heterosexual or homosexual, are sufficiently aware of the risks of unsafe sex. I doubt that television advertising will alter the practices of these individuals, who are obviously concerned with issues such as intimacy, spontaneity, and passion. Sexually transmitted diseases, and the possibility of death for that matter, are risks that these individuals consciously assume on a regular basis. Of course, some individuals can benefit from an occasional television reminder, especially those who sporadically practice safe sex. Although I have no religious or moral objections to the well-intentioned ad campaign, I feel that it is poorly targeted. Perhaps public health policy should concentrate its efforts on programs similar to the one here in St. Louis, rather than promoting the use of condoms to a population that may or may not have reason to benefit from their existence.

Washington forgets that television, albeit the most potent medium for social enlightenment, is a double-edged sword. The notion that a television promotional advertisement, regardless of its length or quality, can reverse three decades of passion from the likes of *Dynasty* and *Dallas* (not to mention their daytime counterparts) is hopelessly optimistic in my view. Although I realize that viewers take health messages that are targeted at them with more gravity than the latest rerun of *Mellrose Place,* I must acknowledge the cultural and sexual perceptions imposed on us at an early age by television. After all, when was the last time we saw a television love scene sponsored by producers of Trojan® or Lifestyles® condoms? ■

**Robert Puchalski is a medical student at Washington University. He was recently elected the MSMA Vice Councilor for the Student Section.**

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**NOTE: Griffith E. Liang, a medical student at Washington University, is the author of the article, "Include Physicians in Reform Decisions," in the April issue of *Missouri Medicine*. Craig Carmichael, who is listed as the author, is the coordinator of the medical student articles.**

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# Breast of chicken

3-oz. cooked serving of chicken breast

## Today's Pork: Compare it to chicken for a healthy surprise

You may not have considered pork to be a healthy choice for your patients on fat-modified diets. But today's fresh pork compares surprisingly well to chicken in total fat, saturated fat, cholesterol, and calories.[1,2*]

| | Calories | Total Fat | Saturated Fatty Acids | Cholesterol |
|---|---|---|---|---|
| Chicken Breast, skinless | 140 | 3.0 g | 0.9 g | 72 mg |
| Pork Tenderloin, trimmed | 139 | 4.1 g | 1.4 g | 67 mg |
| Pork Top Loin Roast (boneless), trimmed | 165 | 6.1 g | 2.2 g | 66 mg |
| Center Loin Chop, trimmed | 172 | 6.9 g | 2.5 g | 70 mg |
| Chicken Thigh, skinless | 178 | 9.2 g | 2.6 g | 81 mg |

*Table refers to 3-oz. cooked servings.

**Missouri Pork Producers Association**
**Route 11, 6235 Cunningham Drive**
**Columbia, Missouri 65202-9162**
**(314) 445-8375**

# Best of pork

3-oz. cooked serving of pork tenderloin

## *New study:* Pork is now 31% leaner

Pork is leaner today because of significant changes made in breeding and feeding techniques. According to new 1991 official USDA data, fresh pork sold today contains an average of 31% less fat after cooking and trimming than the same pork cuts reported in 1983.[1]

Today's pork fits well within the dietary guidelines recommended by both the American Heart Association and the National Cholesterol Education Program. Here's some advice to help patients on low-fat diets enjoy the variety, extra taste, and versatility of pork:

- Choose the leanest cuts. Shop for cuts with "loin" in the name.
- Trim away any visible fat.
- Keep portions moderate (about 3 oz, cooked).
- Prepare by broiling or roasting, and avoid additional fat in preparation.

1. US Dept of Agriculture. *Composition of Foods: Pork Products*, 1991. Agricultural handbook 8-10.
2. US Dept of Agriculture. *Composition of Foods: Poultry Products*, 1979. Agricultural handbook 8-5.

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# IN MEMORIAM

■ **Benjamin H. Charles, III, MD,** Ladue, Missouri, died February 6, 1994, at age 86. Dr. Charles received his medical degree at the University of Edinburgh, Scotland, in 1934. He practiced internal medicine and was on the staffs of St. Luke's and Barnes hospitals. During War World II, Dr. Charles served with the Army's 21st General Hospital. He won two Bronze Stars and was made president of the Constantinian Society, a nationwide group of internists who served in the Mediterranean during the war. Dr. Charles was a member of the American Society of Internal Medicine.

■ **Frank Cohen, MD,** Maryland Heights, Missouri, died February 19, 1994, at age 78. Dr. Cohen received his medical degree at the University of Toronto in 1939. He was an internist in the St. Louis area for 50 years. Dr. Cohen was on staff at Jewish Hospital from 1939 to 1989. He was also on staff at Koch Hospital and the Labor Health Institute.

■ **Leonard W. Fabian, MD,** St. Louis, Missouri, died March 25, 1994, at age 70. During War World II, he had his first medical opportunities as a medical corpsman stationed in the South Pacific on the *USS Bountiful*. After his discharge, Dr. Fabian received his medical degree at the University of Arkansas in 1951. He became an assistant professor of anesthesiology at Duke University in 1955. While at Duke, Dr. Fabian worked on perfecting fluothane and received numerous honors for his work. He became chairman of anesthesiology at the University of Mississippi Medical Center in 1958. In 1964, he was editor of *Anesthesia and the Circulation* and later edited other anesthesia publications. Dr. Fabian transferred to Washington University in 1971 and was on staff at Barnes and St. Louis Children's hospitals. He retired from teaching in 1992. Dr. Fabian was past president of the American Society of Anesthesiologists, a former national consultant in anesthesiology for the Air Force surgeon general, and a past chairman of the St. Louis Cardiopulmonary Resuscitation Committee. He was also a member of the International Anesthesia Research Society and the American College of Anesthesiologists.

■ **Bela K. Kent, MD,** Fairway, Missouri, died March 27, 1994, at age 86. Dr. Kent received his medical degree at Orvosi Fakultas Tudomanyegyetem, Budapest, Hungary, in 1932. He practiced medicine as an obstetrician and gynecologist in the Kansas City area for 46 years before retiring in 1986. Dr. Kent was a past president of the medical staff of Menorah Medical Center. He was a founding fellow of the American College of Obstetricians and Gynecologists and a member of the International and American colleges of surgeons, the American Society of Abdominal Surgeons, the American Physicians Fellowship, Inc. and the New York Academy of Science.

■ **Paul E. Kratz, MD,** Cape Girardeau, Missouri, died January 26, 1994, at age 74. Dr. Kratz received his medical degree at the University of Pennsylvania in 1944. He practiced in Columbia City, Indiana, from 1950 to 1954. He had practiced in Cape Girardeau since 1954. Dr. Kratz was a member of the Cape Girardeau County Area Medical Society, Missouri State and American Medical Associations, American Fertility Society, American College of Obstetricians and Gynecologists, and the American Association of Laparoscopists.

■ **George Mandler, MD,** Chillicothe, Missouri, died April 18, 1994, at age 87. Dr. Mandler received his medical degree at Charles University Medical School, Prague, Czechoslovakia, in 1930. Dr. Mandler served in the Czechoslovakian Army as a medical officer during World War II. He immigrated to America in 1949. After residency at Jefferson College Medical School in Philadelphia, Dr. Mandler opened his practice in Chillicothe in 1951. He was a Fellow of both the National Ophthalmological Society and the National Rhinological Society. Dr. Mandler was a delegate to the International Congress of Otolaryngology in Mexico City in 1969. In 1991, the Missouri State Medical Association honored him as Doctor of the Year. Dr. Mandler was past president of the Grand River Medical Society. He was also a member of the American Academy of Ophthalmology and Otolaryngology.

# NEW MEMBERS

❖ **Brian W. Adkison, DO,** 1900 S. National, Suite 2800, Springfield, MO 65804, has become a member of the Greene County Medical Society. Dr. Adkison received his doctor of osteopathy at Kirksville College of Osteopathic Medicine in 1990. He completed his residency at Deaconess Hospital, St. Louis. Dr. Adkison specializes in family practice.

❖ **Susy Alias, MD,** 11125 Dunn Rd., Suite 311, St. Louis, MO 63136, has become a member of the St. Louis Metropolitan Medical Society. Dr. Alias received her medical degree at Calicut Medical College, India in 1969. She completed her residency at the University of Missouri-Columbia. Dr. Alias specializes in physical medicine & rehabilitation.

❖ **Donald E. Arnold, MD,** 621 S. New Ballas, St. Louis, MO 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Arnold received his medical degree at the University of Wisconsin in 1984. He completed his residency at Dartmouth-Hitchcock Medical Center, Hanover, NH. Dr. Arnold specializes in anesthesiology.

❖ **Lawrence J. Baudendistal, MD,** 3635 Vista at Grand, Box 15250, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Baudendistal received his medical degree at St. Louis University in 1980. He completed his residency at Massachusetts General Hospital, Boston, MA. He specializes in anesthesiology.

❖ **Paul M. Berman, MD,** 621 S. New Ballas Rd., #2003, St. Louis, MO 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Berman received his medical degree at the Chicago Medical School in 1990. He completed his residency at St. Louis Children's Hospital. Dr. Berman specializes in pediatrics.

❖ **R. Dan Bieser, DO,** 69 Doctors' Park, Cape Girardeau, MO 63701, has become a member of the Cape Girardeau County Area Medical Society. He received his doctor of osteopathy at Kirksville College of Osteopathic Medicine in 1990. He completed his residency at Allegheny Family Physicians, Altoona, PA. Dr. Bieser specializes in family practice.

❖ **Joseph J. Billadello, MD,** 660 S. Euclid, Box 8086, St. Louis, MO 63166, has become a member of the Missouri State Medical Association. Dr. Billadello received his medical degree at Georgetown University in 1978. He completed his residency at Duke University, Durham, NC. Dr. Billadello specializes in cardiology.

❖ **Bradley K. Bittle, MD,** #62 Doctors' Park, Cape Girardeau, MO 63701, has become a member of the Cape Girardeau County Area Medical Society. Dr. Bittle received his medical degree at Southern Illinois University in 1986. He completed his residency at Michigan State University and fellowship at Good Samaritan Regional Medical Center/Carl T. Hayden VA, Phoenix. Dr. Bittle specializes in pulmonary medicine/sleep disorders medicine.

❖ **Frederick R. Bode, MD,** 1 Hospital Dr, MA419MSA, Columbia, MO 65212, has become a member of the Boone County Medical Society. Dr. Bode received his medical degree at the University of Michigan in 1965. He completed his residency at Henry Ford Hospital, Detroit MI. Dr. Bode specializes in pulmonary disease.

❖ **Mira L. Choe, MD,** 401 Pine St., St. Louis, MO 63102, has become a member of the St. Louis Metropolitan Medical Society. Dr. Choe received her medical degree at the University of Missouri-Kansas City in 1990. She completed her residency at Kettering Medical Center. Dr. Choe specializes in internal medicine.

❖ **Gary B. Confer, MD,** 1675 E. Seminole, Springfield, MO 65804, has become a member of the Greene County Medical Society. Dr. Confer received his medical degree at the University of California, Irvine in 1985. He completed his residency at Henry Ford Hospital, Detroit, MI. Dr. Confer specializes in radiology.

❖ **Robert M. Custer, MD,** 3635 Vista at Grand, St. Louis, MO 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Custer received his medical degree at Ohio State University in 1989. He completed his residency at Ohio State University Hospital, Columbus, OH. Dr. Custer specializes in anesthesiology.

❖ **Grant V. Darkow, MD,** 2703 Clark Lane, Columbia, MO 65202, has become a member of the Boone County Medical Society. Dr. Darkow received his medical degree at the University of Missouri-Columbia in 1989. He completed his residency at the University of Missouri-Columbia. Dr. Darkow specializes in pathology.

❖ **William R. Detten, DO,** 1965 S. Fremont, Suite 1900, Springfield, MO 65804, has become a member of the Greene County Medical Society. Dr. Detten received his doctor of osteopathy at the University of Health Sciences, Kansas City. He completed his residency at Cox Medical Center-North, Springfield. Dr. Detten specializes in family practice.

❖ **John F. Eisenbeis, MD,** 3635 Vista Ave at Grand Blvd., St. Louis, MO 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Eisenbeis received his medical degree at Washington University in 1988. He completed his residency at Loyola University of Chicago Medical Center. Dr. Eisenbeis specializes in otolaryngology.

❖ **Gerald K. Fleer, MD,** 70 Jungerman Circle, Suite 101, St. Peters, MO 63376, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Fleer received his medical degree at the University of Kansas in 1989. He completed his residency at St. Joseph's Hospital, Chicago. Dr. Fleer specializes in obstetrics and gynecology.

❖ **Zachary B. Gerbarg, MD,** 940 West Port Plaza, Suite 300, St. Louis, MO 63146, has become a member of the Missouri State Medical Association. Dr. Gerbarg received his medical degree at Albany Medical College, Albany, NY, in 1979. He completed his residency at Baystate Medical Center and fellowship at Yale New Haven Children's Center. Dr. Gerbarg specializes in internal medicine.

❖ **Gary M. Goodman, MD,** 1585 Woodlake Dr., Suite 201, Chesterfield, MO 63017, has become a member of the St. Louis Metropolitan Medical Society. Dr. Goodman received his medical degree at the University of Michigan in 1981. He completed his residency at the University of Wisconsin and fellowship at St. Louis University. Dr. Goodman specializes in pediatrics.

❖ **J. Leon Gregston, MD,** 1675 E. Seminole, Suite J, Springfield, MO 65804, has become a member of the Greene County Medical Society. Dr. Gregston received his medical degree at the University of Oklahoma in 1970. He completed his residency at St. Anthony Hospital, Oklahoma City. Dr. Gregston specializes in radiology.

❖ **Frances A. Hedrick, MD,** 165 W. Simon Blvd., Holts Summit, MO 65043, has become a member of the Cole County Medical Society. Dr. Hedrick received her medical degree at the University of Colorado in 1984. She completed her residency at the University of Missouri-Columbia. Dr. Hedrick specializes in family practice.

❖ **Thomas R. Hoberock, MD,** 101 Skaggs Rd. #403, Branson, MO 65616, has become a member of the Tri-Lake Medical Society. Dr. Hoberock received his medical degree at the University of Missouri-Columbia in 1966. He completed his residency at the University of Louisville, KY. Dr. Hoberock specializes in general surgery.

❖ **Luciann L. Hruza, MD,** 1040 N. Mason Rd., Suite 120, St. Louis, MO 63141, has become a member of the Missouri State Medical Association. Dr. Hruza received her medical degree at Boston University in 1988. She completed her residency at Washington University. Dr. Hruza specializes in dermatology.

❖ **Randall W. Lewis, DO,** 2817 High Ridge Blvd. #509, High Ridge, MO 63049, has become a member of the Missouri State Medical Association. Dr. Lewis receives his doctor of osteopathy at Kirksville College of Osteopathic Medicine in 1982. He completed an internship at Doctors' Hospital, Columbus OH. Dr. Lewis specializes in family practice.

❖ **Roberta L. Loeffler, MD,** 4932 Forest Park, Suite 7B, St. Louis, MO 63108, has become a member of the St. Louis Metropolitan Medical Society. Dr. Loeffler received her medical degree at Washington University in 1984. She completed her residency at Jewish Hospital, St. Louis. Dr. Loeffler specializes in internal medicine.

❖ **Mark S. Matlock, MD,** 2817 McClelland Blvd, #125, Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Matlock received his medical degree at the University of Oklahoma in 1982. He completed is residency at the University Oklahoma. Dr. Matlock specializes in dermatology.

❖ **Alec Patterson, MD,** One Barnes Hospital Plaza, Suite 3108 Queeny Tower, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Patterson received his medical degree at Queens University, Kingston, Ontario, Canada, in 1974. Dr. Patterson specializes in thoracic surgery.

❖ **Carl I. Price, MD,** 1001 E. Primrose, Springfield, MO 65807, has become a member of the Greene County Medical Society. Dr. Price received his medical degree at the University of Texas Medical Branch Galveston in 1985. Dr. Price completed his residency at Emory University, Atlanta, GA. Dr. Price specializes in plastic surgery.

❖ **Beena M. Reddy, MD,** 3635 Vista at Grand Blvd., St. Louis, MO 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Reddy received her medical degree at the University of Kansas in 1989. She completed her residency at St. Louis University. Dr. Reddy specializes in anesthesiology.

❖ **Necita L. Roa, MD,** One Barnes Hospital Plaza, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Roa received her medical degree at the University of the Philippines, Manila, in 1969. She completed her residency at Barnes Hospital. Dr. Roa specializes in anesthesiology.

❖ **Ronnie G. Smalling, MD,** 1965 S. Fremont, Suite 2950, Springfield, MO 65804, has become a member of the Greene County Medical Society. Dr. Smalling received his medical degree at the University of Oklahoma in 1986. Dr. Smalling completed his residency at Oklahoma Health Sciences Center. Dr. Smalling specializes in internal medicine.

## RESIDENT

Robert Tolan, MD - *Pediatric Infectious Disease*

# CME CALENDAR

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send CME information for listing in *MISSOURI MEDICINE*. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

## May

2 - *St. Louis*: **City-Wide Radiology Conference: Peter Mueller, MD - Interventional Radiology.** Contact R. Gilbert Jost, MD, Mallinckrodt Institute of Radiology, 314/362-7130.

5 - *Springfield*: **"Do No Harm" Whose Life is it Anyway...The Ethical Challenge of a New Millennium.** 5 credit hours. Call Carol Caffey, 417/836-6660.

**6** - *Springfield*: **Advanced Cardiac Life Support Re-Education Course.** 8 credit hours. Call Julie Hartley, 417/885-6111.

**6 to 8** - *St. Petersburg, FL*: **Physicians' Liability Issues.** 11 credit hrs. St. Louis University, 314/577-8167 or 800/553-2712.

**7** - *St. Louis*: **5th Annual Current Guidelines for Office Management of Patients with Cardiovascular Disease.** 3 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**7** - *St. Louis*: **Sleep Disorders for the Primary Care Physician.** Washington University 314/362-6893 or 800/325-9862.

**7** - *St. Louis*: **Coronary Interventions 1994: Thrombolysis Stents and Coronary Flow.** 5 credit hrs. St. Louis University, 314/577-8167 or 800/553-2712.

8 - *Ft. Lauderdale, FL*: **Corneal Topograghy Skills Transfer.** 7 credit hours. Contact Kerry Assil, MD, 314/865-8333.

**9 to 11** - *St. Louis*: **Spinal Fracture Fixation, Part I: Cervical Spine.** 20 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**11 to 13** - *Kansas City*: **A Teaching Course in Coronary Angioplasty and New Interventional Devices.** 20 credit hours. Call Beth M. Paul, St. Luke's Hospital, 816/932-2301 or 816/932-5119.

**11 to 13** - *St. Louis*: **Pediatric Advanced Cardiac and Trauma Support for Life/Pediatric Advanced Life Support Provider Course.** 20 credit hrs. Call Mary Beth Foerstel, 314/577-5385.

**12 to 14** - *St. Louis*: **Spinal Fracture Fixation, Part II: Thoracolumbar Spine.** 20 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**12 to 14** - *St. Louis*: **WUMCAA Reunion.** Washington University 314/362-6893, 800/325-9862 interstate.

13 - *Kansas City*: **Practical Cardiology.** 5.5 credit hours. Contact the Ed Bixby Institute, in MO: 800/892-5771, ext. 4306; bordering states: 800/821-5140, ext. 4306.

**14** - *Kansas City*: **Current Concepts in Women's Health Issues.** 6 credit hours. Call Kim Dwork, St. Luke's Hospital, 816/932-3737 or 816/932-5119.

14 - *Springfield*: **Meeting the Needs of Children/Adolescents with Learning Disabilities and/or Attention Deficit Disorder.** 6 credit hours. Call Julie Hartley, 417/885-6111.

**14** - *St. Louis*: **Sleep Disorders for the Primary Care Physician.** Washington University, 314/362-6893 in Missouri, 800/325-9862 interstate.

**17 & 18** - *St. Louis:* **Transesophageal Echocardiography.** 13 credit hrs. Call Dianne Reid, St. Louis University, 314/577-8897.

**18** - *St. Louis*: **Update in Thoracic Surgery.** Washington University 314/362-6893, 800/325-9862 interstate.

**19 to 21** - *St. Louis:* **Craniofacial Surgery.** 24 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**20 & 21** - *St. Louis*: **Contemporary Topics in Cardiothoracic Anesthesia.** Washington University 314/362-6893 in Missouri, 800/325-9862 interstate.

**20 & 21** - *St. Louis*: **Ethics Committees and the Young: Families, Hospitals and Courts.** 18 credit hrs. St. Louis University, 314/577-8167 or 800/553-2712.

**20 & 21** - *Kansas City*: **Pediatric Radiation Oncology Conference.** 10 credit hours. Call Carol Osborne, St. Luke's Hospital, 816/932-3737 or 816/932-5119.

21 - *St. Louis:* **Controversies in Contemporary Imaging.** Washington University 314/362-6893, 800/325-9862 interstate.

**23 to 28** - *St. Louis:* **Health Care Ethics in a Pluralistic Society** 34 credit hours. Call Mrs. Donna G. Troy, St. Louis University, 314/577-8195.

## June

**2 & 3** - *St. Louis:* **Advanced Applications in Endoscopic Neurosurgery.** 14 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**3** - *Springfield*: **4th Annual Decisions in Trauma: From Impact to Recovery.** 6 credit hrs. Call Julie Hartley, 417/885-6111.

**3 & 4** - *St. Louis*: **Neurosurgery Workshop Part I: Advanced Applications in Endoscopic Neurosurgery.** 14 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**4** - *St. Louis*: **Thrombolytic Therapy.** 4 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**6 to 8** - *St. Louis*: **Neurosurgery Workshop, Part II: Peripheral Nerve.** 22 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**8** - *St. Louis*: **Drug Therapy of Alzheimer's Disease.** Washington University 314/362-6893, 800/325-9862 interstate.

**9 to 11** - *St. Louis*: **Neurosurgery Workshop, Part III: Spine - Microsurgery and Stabilization.** 24 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**10** - *Springfield:* **Pediatric Advanced Life Support Renewal Course.** 8 credit hours. Call Linda Climer, 417/885-2648.

10 - *Boston, MA*: **Frontiers in Ovulation Induction.** Washington University 314/362-6893, 800/325-9862 interstate.

**10** - *Springfield:* **Pediatric Advanced Life Support Recertification.** 7 credit hours. Call 417/885-4117.

**10 & 11** - *Columbia*: **16th Annual Pediatrics Program: Common Childhood Problems.** 12.2 credit hours. Call Laurie Seigel, University of Missouri, 314/882-4105.

11 - *St. Louis*: **Treating Neuromuscular Disease.** 5 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.

**11 & 12** - *Chesterfield*: **Sports Medicine for the Family Physician - Ankle and Foot.** 13.25 credit hours. Call Elaine Simons, 314/275-8850.

**11 to 15** - *Arlington, VA*: **Board Review in Family Medicine.** Call Daniel E. Reichard, George Washington University, 202/994-4285.

**13 to 18** - *St. Louis*: **Neurosurgery Workshop, Part IV: Microsurgery of the Brain.** 36 credit hours. St. Louis University, 314/577-8167 or 800/553-2712.
**16 to 19** - *Tan-Tar-A, Osage Beach*: **MAFP 46th Annual Meeting.** Over 20 possible CME hours. Contact MAFP, 8301 State Line Rd., Suite 102, Kansas City, MO 64114.
**21 to 25** - *New York, NY*: **16th National Lesbian and Gay Health Conference and 12th Annual AIDS/HIV Forum.** Call Daniel E. Reichard, GW University, 202/994-4285.
**23 to 25** - *St. Louis*: **Pediatric Advanced Cardiac and Trauma Support for Life/Pediatric Advanced Life Support Provider Course.** 20 credit hrs. Call Mary Beth Foerstel, 314/577-5385.
**23 to 25** - *St. Louis*: **Abusable Medications and Clinical Challenges: Prescribing Psychotropic Drugs for Difficult Patients in Primary Care.** Washington University 314/362-6893, 800/325-9862 interstate.
**24 & 25** - *Kansas City*: **Depression Throughout the Lifespan: Psychopharmacologic & Psychotherapeutic Strategies featuring Drs. Steven Dubovsky, Taylor Segraves, George Zubenko & Walter Menninger.** 12 credit hours. Contact Menninger Continuing Education, 800/288-7377.
**24 to 26** - *St. Louis*: **Frontiers in Endourology.** Washington University, 314/362-6893 or 800/325-9862 interstate.
**25** - *St. Louis*: **Substance Abuse.** Washington University, 314/362-6893 or 800/325-9862 interstate.
**25** - *Springfield*: **Advanced Cardiac Life Support Renewal Course.** 8 credit hours. Call Linda Climer, 417/885-2648.

## July

**8 & 9** - *St. Louis*: **Advanced Trauma Life Support Provider Course.** 16 credit hours. Call Joyce Hope, 314/577-8802.
**8 to 10** - *Springfield*: **Advanced Cardiac Life Support Provider Course.** 18 credit hrs. Call Julie Hartley, 417/885-6111.
**9** - *St. Louis*: **Advanced Trauma Life Support Provider Refresher Course.** 16 credit hrs. Call Joyce Hope, 314/577-8802.
**15** - *San Francisco, CA*: **Frontiers in Ovulation Induction.** Washington University 314/362-6893 or 800/325-9862 interstate.
**15** - *Springfield*: **Breast Cancer Symposium Early Diagnosis and Treatment.** 5.75 credit hrs. Call Donna Gloe, 417/885-2770.
**16** - *Irvine, CA*: **Corneal Topography Skills Transfer.** 7 credit hours. Contact Kerry Assil, MD, 314/865-8333.
**16 & 17** - *Springfield*: **Advanced Cardiac Life Support Course.** 17.4 credit hrs. Call Maryann Jeter, 417/885-5400.
**20** - *St. Louis*: **Pediatric Advanced Life Support Recertification Course.** 7 credit hours. Call Mary Beth Foerstel, 314/577-5385.
**24 to 29** - *Crested Butte, CO*: **Medical Marriages: Balancing Commitments to Family and Profession featuring Dr. Roy & Bev Menninger.** 24 credit hours. Contact Menninger Continuing Education, 800/288-7377.
**28 to 30** - *St. Louis*: **Clinical Allergy for the Practicing Physician.** Washington University 314/362-6893 or 800/325-9862 interstate.

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**PRIMARY CARE PHYSICIAN** - wanted for excellent practice opportunity. Association with urban hospital with progressive management immediately available. Send C.V. and letter of interest to: Linda M. Allin, CEO, Incarnate Word Hospital, 3545 Lafayette Avenue, St. Louis, MO 63104, 314-865-6870.

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**AN EXCELLENT OPPORTUNITY CURRENTLY EXISTS FOR A PART-TIME PHYSIATRIST** to join a single specialty group on staff at Christian Hospital Northeast-Northwest. Christian Hospital, a member of the Barnes Jewish Christian Health System, is a 728 bed full service community hospital. Rehabilitation services include both inpatient and outpatient. This opportunity is ideal for the physician that would like to begin on a part time basis and has the potential to become a full time practice. The ideal candidate will be board eligible or board certified in Physical Medicine & Rehabilitation. This position will be based on a 20-25 hour work week. In return, the physician would receive an excellent salary and be eligible for benefits. To learn more about this excellent opportunity, please contact the Department of Executive Employment at (314) 653-5543 or send your curriculum vitae in confidence to Barnes Jewish Christian Health System, Executive Employment, 11133 Dunn Road, St. Louis, MO 63136.

**CRITICAL CARE PHYSICIAN PRACTICE OPPORTUNITY** - Christian Hospital, a 728-bed acute care facility located in suburban north St. Louis County, is seeking a Critical Care Physician to join its expanding Intensive Care Unit. The ideal candidate should be board certified in Internal Medicine and board qualified in Critical Care Medicine, Cardiology, or Pulmonary Medicine. Christian Hospital is a full service medical center which houses an active cardiac surgery program, a Level II Trauma Center, and has the busiest Emergency Room in the state of Missouri. The construction on our new, state-of-the-art, 26-bed multipurpose Intensive Care Unit was completed in March of 1993. The Critical Care Department consists of eleven full-time physicians who provide medical coverage to two Intensive Care Units and three Step Down Units. We offer competitive salaries and an outstanding benefit package, which includes medical, dental insurance, life insurance, malpractice insurance, a pension fund plan, generous medical education leaves, shift differential, etc. To apply, send your curriculum vitae in confidence to, or call collect: Daniel W. Brewer, Corporate Director, Executive Employment, Christian Hospital Northeast, 11133 Dunn Road, St. Louis, MO 63136, 314-355-2500, ext. 5543 or Leon Bialecki, MD, Director of Critical Care Medicine, same address as above and ext. 5469.

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Journal of the Missouri State Medical Association

June 1994

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- ❑ Diabetes-Related ESRD in Missouri
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**MISSOURI STATE MEDICAL ASSOCIATION**
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The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the cost os a copy of the annual August Directory is $15.00.

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# Missouri State Medical Services, Inc.

J. Regan Thomas, MD, Editor

The MSMA has established a significant new service to physicians which was unveiled at this year's annual meeting in Kansas City. Titled the Missouri State Medical Services, Inc. (MSMS), the new organization is directed toward developing high quality, professional, comprehensive practice management services. The goal is to make these services available at competitive, affordable rates for practices of all sizes. The service represents a very tangible benefit from the MSMA and most importantly it represents a "physician directed" enterprise.

The general purpose of MSMS will be to assist physicians in the operation and management of their practice activities. Services which they plan to make available to subscribers would include office computer and data management systems, practice assessment, reimbursement analysis, managed care contract analysis, personnel management, and physician recruitment. They also plan to provide consultation for those interested in the purchase, sale, or integration of practices. For the individual practice or physician they offer help to manage and practice more efficiently and effectively, maximize revenue, and generally improve patient access and care.

On a statewide basis, MSMS stated goals call for the assessment, design and planning of a network of physician organizations. These organizations would presumably allow for enhanced purchasing opportunities as well as group negotiating advantages. They also plan to develop a statewide database that will track and analyze clinical data, treatment outcomes, patient satisfaction, practice expenses, and cost utilization.

The organization is run under the governance of a board of directors. President of the board is Dan O'Sullivan, MD, of St. Louis. Dr. O'Sullivan is known through his active work on the MSMA Council and is an active advocate of physician representation in legislative and regulatory issues. Tom Bennett, MBA, M.Div, MSW, has been named Executive Vice President and brings an impressive background to MSMS that includes health administration experience with significant "hands on" involvement with physician practice management.

Time will reveal the effectiveness of this concept. I anticipate it will prove to be a successful project. Certainly, whenever someone asks for examples of tangible benefits of organized medicine, the MSMS will be at the top of the list. The MSMA, and the Council are to be commended for their insight and innovation in initiating this new venture. ■

# Drafting legislation for health system reform is first goal

*Missouri Medicine* interviews MSMA President H. Jerry Murrell, MD

**MM: What are your goals for this year?**

**HJM:** Since I became so involved in the state's legislative efforts the last few years, its not surprising that one of my goals is in the legislative arena. This year has been a seminal year for health care system reform efforts both nationally and at the state level. This year Gov. Carnahan attempted a massive evolution in health care delivery in this state by his HB 1622.

Much of the efforts of the several bills before the house and senate this year were put together without the physicians of Missouri being involved in the planning and drafting. I think that is why those bills fared as poorly as they did. Had physicians had a bigger hand in the planning and drafting of some of those health system reform bills, they may have been drawn in a way to better address the needs of the citizens.

Therefore, I have determined to play a central role in the drafting of a suggested health care reform bill for presentation at the next Missouri State Legislature. I have invited the Missouri Hospital Association and our Osteopathic colleague's association, MAOPS, to join us in this effort. I think that the medical association will have a bill for presentation next year even if we have to do it on our own. I would hope that as the bill begins to take form that we would invite members of the legislature and members of the executive branches of government to review and hopefully support the bill.

**MM: In what other directions will MSMA need to focus efforts?**

**HJM:** Other goals and challenges that face the society include the completion of the formation of the MSMS (Missouri State Medical Services, Inc.). I think that subsidiary will prove of great value to our members. We also expect to complete the formation of a peer review task force panel which will be available for consultation throughout the state. The third challenge facing the society this year is the replacement of our executive vice president, Mr. Royal Cooper. Mr. Cooper has served us very well for twenty-five years and is choosing to pursue other avenues for the remainder of his career and the job of selecting the right person as his replacement will be quite time-consuming.

**MM: MSMA has a strong lobbying team thanks to legislative committee and lobbyists. Are we as strong as some say we are, and in what ways do we work the process better than other organizations? Do we have weaknesses?**

**HJM:** We have been blessed for several years by having skilled lobbyists available to us within our society. It has been years since we have had to rely on contract lobbyist for the bulk of our work. For the last couple decades we have had staff within the society to do all of our lobbying and they have done it very well.

One problem that I see currently is that there are so many different bills to keep track of these days that our lobbying efforts are sometimes frenetic with so many different paths to follow. We may have to consider expanding to a third lobbyist or consider some part-time contract lobbying assistance. Many of our more focused organizations have far fewer bills to keep track of. The medical subspecialty organizations may have only one or two bills of special interest to their members. Whereas the state medical society which represents a collection of interests and subspecialties prides itself trying to keep track of a great many bills. Our lobbyist act as educators to the legislators. The legislators are well-intentioned people who are faced with an enormous bombardment of decisions to make regarding a great many different topics. The lobbyists routinely act as a resource for education for the legislators to point out to the legislators potential ramifications of a vote yes or vote no.

They help the legislator to best represent his or her constituents. When a society such as ours becomes active in so many different fields it is very time consuming and so far we have been blessed with very competent assistance in this arena.

The interest sparked both on the national and the state level for health care system reform energized a great many physicians into political and lobbying activities. Many of these people have never before been energized in this fashion. I am grateful for their enthusiasm and for their interest in lobbying, however, I believe that medicine can best be served by a coordinated effort by these various component societies and members. I think we must stay in close communication with each other and coordinate our efforts instead of individually striking out and taking off in one direction. I believe that the interest of all will be best served by a statewide coordinated lobbying group.

**MM: What should individual members be doing legislatively while we're in between sessions?**

**HJM:** Individual members during the summer should stay cognizant of what's going in health system reform both at the state and national levels. They can keep up simply by reading newspapers and news magazines, watching the news summaries, and being alert and aware of what's happening. There may be instances over the summer and early fall when we need to organize a grass roots response and we may not have a great time lag to get ready for it. Most component medical societies need to be prepared to ask their members to write letters to their legislators on an as needed basis. And most members should be prepared enough through their individual knowledge of national affairs to respond appropriately and quickly when called upon.

**MM: You have been very active in the leadership role of the medical association. What are the benefits for a member to pursue an active role in their local and state organizations?**

**HJM:** The benefits of association membership do not accrue only to those members who are active in the leadership positions. The benefits of association membership are available to virtually all members. Some of those benefits are practice aids and assistance, personal insurance programs, retirement management and investment advice, other benefits are that organized medicine at the national, state and local county levels act as a voice to make physicians positions known publicly. The association affords an avenue for organized collective involvement in state government through our lobbying efforts at the legislature. Personal benefits involved with being in the leadership of the society are gratifying. It is always satisfying to be the beneficiary of one's peers appreciation however there are many ways to make your voice known besides being in leadership roles. There are committees & commissions available in all three levels of organized medicine which would afford avenues of individual input into the mission of the society.

**MM: Do you have any ideas about increasing membership?**

**HJM:** Membership continues to be an aspect of the society that is a concern year in and year out. I think that now something like 60% of the national physicians are members of the AMA and something like over 50% of the physicians in Missouri are members of MSMA. The physicians who are none members have a variety of reasons for not joining, these include the fee structure for dues, the failure of the society to be able to cure all ills and answer all problems. However, I think again that the fever for health system reform that is sweeping the country will serve as a impetus for physicians to collectively respond and I suspect that this fever for national and statewide system reform will ultimately be a wonderful recruitment item for us.

**MM: How would you compare practicing medicine in Missouri to other states in which you have practiced?**

**HJM:** I have been privileged to practice medicine in a training environment in California, Kansas and Missouri. I practiced as an attending physician in Missouri briefly and then in New Mexico and Arizona prior to coming back to Missouri. It impresses me that the general level of sophistication in medicine in Missouri is very satisfactory. We have a diverse population. The fact that there are three large population centers, rather than a single one as in New Mexico, or only two as in Arizona, makes for increased diversity. Although the level of sophistication of medicine very high, the diversity of opinions is more here than in either of those states I've mentioned. Those states tend to be a bit more homogenous in their approaches to problems and attitudes. The level of sophistication and the diversity make Missouri challenging and fascinating.

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**MM: Society is redefining the delivery of health care in America. What are some of the elements up for grabs?**

**HJM:** President Clinton should be congratulated for his courage in bringing the focus of American attention to health care system reform. He has verbalized the particular elements of the system that need addressing eloquently and very properly. The citizens need access to proper health care, they need security to know that the health care will be available to them. We need to maintain the quality of our health care delivery system. We have the best system in the world currently and we need to be sure that it stays that way. And we need to address the cost of health care delivery in the United States. Our superb system is a costly system and we need to look at those costs not with a mind to blindly reduce the cost but to judiciously exercise efficiency methods where we can do so without jeopardizing quality.

**MM: Doctors are teachers. Should they reserve teaching their knowledge to other doctors or should they be more involved in society as a whole?**

**HJM:** I think there's a strong element of the teacher in most physicians. Certainly for a few of us we choose to concentrate on the teacher desire and spend our lives in medical education. For many others of us the educational side does not take the prime front seat in our lives. However most of us continue to attempt to educate ourselves, our patients and our society with honesty and dignity. This could be done through involvement in community affairs, it can be done through church involvement, through scouting and other youth groups, through school board participation and involvement. I think most physicians will seek out an avenue where they can teach and attempt to mold the citizens viewpoint, particularly the younger citizens.

**MM: Should MSMA be debating questions such as what age or cost limits should be placed on medical care, who gets to decide when a life can be ended, or how far should we go with genetic experiments?**

**HJM:** The ethics of health system reform clearly should be and must be explored. There are obviously conflict between an individual's rights and the rights and obligations of society as a whole. This conflict is particularly dramatic when public monies are involved in paying for the health care. United States citizens tend to be individualistic in nature and most citizens feel that it is a citizen's right to obtain legally that which he can afford. However when one gets into the realm of expenditure of public monies one drifts more quickly into potentially ethical controversies. Classically should the 90 year old have a heart transplant? If there are only so many heart donors out there how does one make decision regarding who the recipients are going to be. That is but one example of an ethical conflict involved in health care delivery particularly when one is keeping a sharp eye to costs. And I don't have any bold answers for that. Obviously the state of Oregon has attempted one method of dealing with the expenditure of public monies for health care delivery. They have drawn up a list of procedures and diagnostic subsets and to determine a priority list of procedures for which public monies will and will not be made available. It's a daring experiment in social engineering. Other states are dealing with these ethical problems of cost concerns related to health care delivery in a variety of ways. We have not come to grips with that in Missouri yet so far as I know.

**MM: When physicians fought epidemics in the early 20th Century they had to be both healer and scientist so they could isolate the disease and concoct a cure. In the 21st Century, will the physician need to be both healer and social reformer?**

**HJM:** Very likely. There is no question that in the United States we have more individual freedoms and liberties than any other country however we also pursue absurd lifestyles and dangerous habits which can be self-destructive and unhealthy. The role of any professionals - physicians, nurses, social workers, teachers, educators - should be to continue to point out to the public the disastrous tragic results of such absurd lifestyles and dangerous habits. And therefore yes. I think that in the 21st century most physicians will find that their educational efforts parallel the role of social workers in many areas. ■

# Third Party is the biggest frustration

*Missouri Medicine* interviews MSMA Alliance President Jean Wankum

**MM: What are your personal goals for this year?**

**JEAN:** I don't have a personal goal; however, I do for the Alliance and that is a desire for membership to actively work for legislation which would truly help and not harm our patients.

I hope that spouses will be motivated and encouraged by me to want to become contributing members. They all have a special, unique quality to offer. We need to have their new ideas and fresh approaches to address long standing health problems and the problems facing society today.

**MM: What do you bring to this leadership position?**

**JEAN:** I feel that I bring an openness and enthusiasm. I've been ill, and being on the flip side of medicine. I think I can bring a different perspective, to look at issues both from the patient's side and from the medical side. Hopefully this will be useful in formulating health projects, in how we address the public, and how I convince others to join our organization.

**MM: You work on a daily basis with your husband. What insight has this contact given you in terms of frustrations physicians are having in their practices today?**

**JEAN:** To me the greatest frustration is Third Party...the absolute burden that it brings into the practice. It seems there is very little left to the patient, doctor, and nurse.

My biggest job is trying to keep up with Medicare coding changes, OSHA, requirements of each insurance carrier, and with that comes pounds of paper that one must sift through to find that one paragraph which applies to the practice. If I don't do it, then those pounds of paper are going to end up on my husband's desk and I'm going to see even less of him than I do already.

Basically, it's time consuming. He is already burdened with additional documentation. Insurance companies no longer just take your receipt with the codes on it, they want it explained further. That was supposedly the whole reason for CPT coding, to explain the condition and if your patient fit, then you wouldn't have to explain it even more.

I also find that the wording on EOBs (Explanation of Benefits) are written negatively towards the doctor in a manner that puts up a barrier between the patient and the physician. It's as though their intent is to imply that the physician is not being fair to the patient. It interferes with the physician-patient trust relationship that's been established over the years. The flip side to this is that sometimes you have to listen to the patients because they are so angry at the insurance company getting in between them and the physician. You get it from both sides.

Another frustration is not being left alone. It's a sadness that comes to you with the changes in medicine. We've been in practice 17 years and have built a good practice. We started from nothing and with a lot of hard work our practice grew. We have wonderful patients and we're pleased with the outcome. However, now we're faced with all the changes in medicine and as a solo practitioner, I don't feel like we have much freedom or leverage for realignment in a changing system.

Another aspect we forget about is our staff. We have staff that have been with us since the day we opened the door. They helped this practice grow. They know all the patients. It's an uncertainty for them, 'What's going to happen to me? What happens if you join this bigger practice? or, What happens if the

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hospital buys us out? Do I get any say?' Even though it's a work relationship, you are friends with your employees. There's a mutual respect- a give and take, and they don't know what to expect either. It's very disruptive. We think of the medical community as the physician and his or her family, but you have to look at these people who have worked with you for years and are as equally committed to your patients.

As a nurse in the practice I used to have a lot more time to educate the patient or just to sit and listen after I took the medical history and let them talk. Much of the time it had nothing to do with their medical care. They've had a crisis with a child or their elderly parents. They come in, they want to have their eyes checked but they're really wanting more than that from you and I miss this aspect. In this new age of medicine, so much valuable one to one caring is being lost.

**MM: You have ranked the four purposes of the Alliance in the order of Health Promotion, Legislation, Membership and AMA-ERF. What specific efforts do you hope will be accomplished in each of these four areas?**

**JEAN:** *Health Promotion* - Quality health promotion is what we are all about. It is especially important at the county level to recognize the health needs of the community and to address these with a program. I think we need to try and solve health problems with both small projects and large ones. Some of the projects may require a year or more of development, but that's okay. As we say, the patient comes first - the patient's health and the health of the community.

*Legislation* - We have to be involved or our ability to provide health care will be so limited that we won't have a choice with the legislation that's out there. Our hands will be tied. Whether we like it or not we're forced to be involved in legislation. I dislike seeing so much energy wasted to get rid of bad legislation, but I realize it's a necessity. At one time I was naive enough to think that right would win out in the end. But what seems obvious to me as what is best for the patient is not necessarily the way the legislators see it. There are so many special interest groups pulling at them that the patients and their true best interests are lost. Therefore, I feel like we have to be involved, we don't have a choice.

*Membership* - We cannot do anything if we do not have membership. None of our projects can be carried out.

*AMA-ERF* - It is a worthy project to give assistance to a young person becoming a physician and it's worthwhile to give the funds to the medical schools for their research and excellence fund. But right now I feel that health and legislation are much stronger priorities and the focus will be less on AMA-ERF.

**MM: What has been the most rewarding experience that you have had as a member of the MSMAA?**

**JEAN:** The friendships and the encouragement my fellow members have given me. They give me ideas, stimulate my mind, and encourage me to do more. They boost self-esteem.

The leadership training one receives can never be taken away. No matter what you do later in life you will always have it. If you don't join, you are never exposed to it.

I remember my first state meeting, coming home and telling my husband that this is absolutely the brightest group that I've ever joined. They have so much to offer, it's just a matter of picking what I want to do to help. It was unlike any other organization I've ever been a part of and it is still. I've served on other foundations and hospital committees but this organization is different. It really is.

**MM: What do you want to convey to physician spouses about being involved with the Alliance?**

**JEAN:** The biggest thing that needs to be conveyed is that they need the Alliance. I don't think they really realize how valuable it can be for them. They need to belong because they need to be educated about what is happening to the profession. It effects their livelihood and their spouses. They need to know how it is effects their spouses, because in essence this will effect their marriages. They need to understand the stress and changes their spouses are going through because of the changes in medicine.

They also need to see the fellowship. Once they come and meet the other people involved, they will find out that in difficult times these are people that will be there for them. These individuals will understand them the most.

The other aspect is that it's fun. It's fun to work on health projects together. It's not only fun, it's challenging. It's a bright educated group of individuals who make up this organization. It's stimulating. It's different than what one's everyday job may be - women and men who are not working in medicine. If it's the woman or man that is staying at home raising the kids, it gives them an outlet for their creativity. It gives them time away from home.

There is a place for every spouse somewhere in this organization whether they give one hour the whole year, whether they want a specific time of week or a specific time of month to do something. It's there and it can all be arranged. It is probably more open to fitting the individual's needs and time frames than any other organization.

Probably the most rewarding aspect about belonging to this organization is that it can make a difference in the community. There has been a lot of criticism about the AMA. At meetings one hears 'I don't know what they're doing for us.' At the AMA Alliance level the materials and the leadership training is absolutely invaluable. The leadership training from the AMA is something you will always take with you no matter what you do later in life.

I feel that people need to realize that with the changes in medicine at the national level we need a big voice and unless members join the AMA, we won't have that voice. We've tended to join our specialty societies, but these organizations do not speak to the larger health reform issue. Often at the state level, they only address an issue if it specifically affects them. This splintering is partially the reason we're in this health crisis. It's because we haven't had been unified or had a strong voice.

**MM: Do you feel that the Alliance is in need of a change of image? Is there any indication that the name change is a step in the right direction?**

**JEAN:** The image change has already happened. It is a different organization than it was ten years ago. Most of the spouses are professionals, they're educated, they're the 'movers and shakers' in their respective communities and we're just lucky enough to have them in our organization.

I think the biggest point to get across is that we are not a social group. It is probably the greatest misconception anyone could have. Granted, we make friendships and share camaraderie at the county level. The evening socializing between the alliance and the medical society is extremely important in this confrontational day, because it's the one forum in which physicians do not have to be competitive. We can sit, share ideas, educate each other and just be friends. I believe now more than ever we need to be able to come together and enjoy individuals that have a common interest.

Already, when I say I represent the Missouri State Medical Association Alliance, I am taken much more seriously than when I said auxiliary. There is a lot in a name. I believe that with 'auxiliary' we were perceived more as a female social organization. With half the medical students now being women, obviously we have a large male spouse population that hopefully with the name change will be more receptive to joining.

**MM: Do you think that the Alliance will ever have an more equally male/female membership?**

**JEAN:** No. I don't. I just do not believe that men develop the same kinds of friendships that women do. There is a certain amount of nurturing in health projects and in trying to correct the ills in society. It might sound biased, but men and women are different and I don't know that men will feel compelled to become involved for the same reasons. If you give them a different job to do, like a legislative battle or public relations, they might have more interest. A mother and father nurture in different ways. It's not saying that one can do the job better than the other, but it will be done differently.

I think we need to promote the organization to male spouses and find a position for them to use their professional skills to work for the betterment of health in the community. They have their own contacts within the community that can be called upon for community coalitions to facilitate some of the larger projects.

**MM: How do you see this organization in ten years?**

**JEAN:** There is no crystal ball! Certainly medicine will change, even if the external structure of that change is not yet known. But physicians delivering necessary care and their spouses supporting that effort will be much the same...caring, giving, hard working, community oriented. That is where this organization is now and where it will be in ten years.

# Physician Leadership: Managing the Process of Change

Tom Bennett, Executive Vice President MSMS, Inc.

Missouri State Medical Services, Inc. has now been operational for two months, and in that time I have had the distinct pleasure of meeting many members of the Missouri State Medical Association in the four corners of the state and in some very interesting venues!

My purpose for traveling throughout the state is in response to invitations from members of MSMA to discuss the role that Missouri State Medical Services Inc. can play in assisting physicians in their practices within the context of this complex and ever-changing health care environment.

I have had the opportunity to address local medical societies, large and small groups of physicians, and individual members of MSMA. In all of these encounters, I have attempted to leave a salient message: that health care is indeed changing; that the changes are happening very rapidly in some communities; and, above all, that physicians must learn the basic principles of directing and managing the process of change.

Physicians are being buffeted by the turbulence of change. Most have taken a very defensive posture, some have given up and have sold out, and many have gathered their wagons in a circle and taken the stance that they will not move no matter how ferocious the storm is around them. Meanwhile, outside of the circle everything is in motion: hospitals, insurance companies, managed care companies, business coalitions, state governments, the federal government and patient advocacy groups. But where are the physicians?

My travels throughout the state of Missouri have only confirmed my impression which is somewhat sarcastically described in the preceding paragraph, that because of the lack of well managed structures with clearly defined leadership, physicians will lose control of their own destinies by not taking charge and directing and managing the process of change. It is my firm conviction that instead of physicians being part of the cause of the "ills" of health care delivery in the USA they can become the very solution. How can this be achieved, you may ask? The first and most important step is finding or identifying physician leaders at the local or community level, and the second step is to create well organized and well managed groups.

Leadership has to do with change: i.e. managing and directing the change process. This is how Mark Twain described the need to change: "Two things seemed pretty apparent to me. One was, that in order to be a [Mississippi River] pilot a man had got to learn more than any one man ought to be allowed to know; and the other was, that he must learn it all over again in a different way every 24 hours." Change is also central to Morgan McCall's definition of leadership as a, "social-influence process."[1] Peter Drucker on the other hand points out that the primary objective of leadership is the creation of the human community held together by the work bond for a common purpose. Leadership, therefore, is about **service**; leadership is about recreating society and specifically our own communities. For physicians, leadership is about **patients**; it's about making health care in our own communities more effective, more affordable, more available, and more accessible; leadership is about taking charge of the process of change; leadership is about values, commitment and conviction.

Warren Bennis the foremost authority on the subject of leadership states that leaders come in all shapes and sizes, but all share the following characteristics:

- **Guiding vision:** a very clear notion of what he or she wants to be or do both professionally and socially, despite obstacles, set backs and failures.
- **Passion:** a leader must love what he or she does.
- **Integrity:** a leader must be self-assured, honest and mature; thus, people will learn to trust the leader and believe in him or her and empower him or her to lead.
- **Curiosity:** a leader must be open and wonder about all things that are possible.
- **Daring:** a leader must be willing to take chances, experiment and not be afraid of failure.[2]

Why then is there such a dearth of physician leaders? One obvious reason is that the structure does not afford physicians the time that must be spent in this noble endeavor. Another is that there is not compensation for carrying out the duties of a physician leader.

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# The Impaired Physician, Part II: Missouri State Physicians Health Program

George M. Bohigian, MD, Jack L. Croughan, MD, Karen Sanders, RN

**Missouri Physicians Health Program (MPHP) was established to help impaired physicians return to healthy personal and professional lives. One percent of Missouri physicians will suffer some sort of impairment; ie: substance abuse, or dependency of drugs or alcohol within a year. This is a confidential voluntary program. This program of early referral, intervention, treatment and monitoring advocacy has been highly successful. The average recovery rate in this study of 75 participants was 92%.**

Doctors afflicted with alcoholism and/or other drug addictions have been acknowledged as a significant problem.[1] Approximately 1 out of 100 physicians will suffer from some sort of impairment due to substance abuse and dependency annually.[2,3,4] In response, the Missouri Physicians Health Program (MPHP) was established in 1985 by the Missouri State Medical Association (MSMA) to deal with issues of impairment among Missouri physicians. This program is available to help Missouri physicians suffering from alcoholism, drug dependence, psychiatric problems, and/or physical impairment.

The purpose of this article is to briefly review the mission of the Missouri State Physicians Health Program and detail the current status of physicians treated within the program.

## PURPOSE AND METHODS

The purpose of the program is to facilitate the physician's return to healthy personal and professional functioning through early intervention, treatment referral, monitoring and advocacy. Physicians who volunteer to participate in the program have the opportunity to arrest the progression of their disease and check impairment before public exposure, disciplinary action of licensure boards or loss of clinical privileges, family relationships, and financial resources occur. Physicians are referred to the program but not all choose to enroll.

The MPHP is legally and financially independent of licensure and regulatory agencies such as the Board of Healing Arts, the Missouri Bureau of Narcotics and Dangerous Drugs, and the Federal Drug Enforcement Administration and has no reporting requirements to the National Practitioner Data Bank. Physicians disabled by alcoholism, drug dependency, psychiatric

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**TABLE 1**

**The following are statistics reflected by the current number of participants in the program as of January 15, 1994.**

**REFERRAL SOURCES (N=75)**

| | (N) | (%) |
|---|---|---|
| Colleague | 18 | (24) |
| Board of Healing Arts | 15 | (20) |
| Hospital | 14 | (19) |
| Treatment Center | 9 | (12) |
| Treating Physician | 5 | (7) |
| BNDD | 4 | (5) |
| Residency Director | 2 | (3) |
| Spouse | 2 | (3) |
| Self | 2 | (3) |
| University Health Services | 1 | (1) |
| Liability Carriers | 1 | (1) |
| Dean of Students | 1 | (1) |
| Other state programs | 1 | (1) |
| **Participants' Sex** | | |
| Male | 72 | (96) |
| Female | 3 | (4) |
| **Professional Status** | | |
| MDs | 59 | (79) |
| DOs | 10 | (13) |
| Residents | 4 | (5) |
| Medical Students | 2 | (3) |

***If you suspect that you, a colleague, a friend or a relative is impaired, call the confidential hotline at 1-800-274-0933.***

**TABLE 2**

**PRACTICE SPECIALTIES: N =75**

| | (N) | (%) |
|---|---|---|
| Internal Medicine | 20 | (26) |
| Emergency Medicine | 11 | (15) |
| Anesthesiology | 5 | (7) |
| Pediatrics | 5 | (7) |
| Cardiology | 4 | (5) |
| Psychiatry | 3 | (4) |
| Orthopaedics | 3 | (4) |
| OB/GYN | 3 | (4) |
| Oncology | 3 | (4) |
| Ophthalmology | 3 | (4) |
| Neurosurgery | 2 | (3) |
| Otolaryngology | 2 | (3) |
| Family Practice | 2 | (3) |
| Radiology | 2 | (3) |
| Surgery | 1 | (1) |
| Addiction Medicine | 1 | (1) |
| Nephrology | 1 | (1) |
| Insurance Medicine | 1 | (1) |
| Pathology | 1 | (1) |
| Gastroenterology | 1 | (1) |
| Plastic Surgery | 1 | (1) |
| **Cause of Impairment:** | | |
| Alcohol/Drug Dependency | 72 | (96) |
| Psychiatric | 3 | (4) |
| **Geographical Locations:** | | |
| St. Louis | 26 | (35) |
| Kansas City | 19 | (25) |
| Southeast Mo | 12 | (16) |
| Springfield | 12 | (16) |
| Columbia | 2 | (3) |
| Rolla | 2 | (3) |
| Hannibal | 1 | (1) |
| Out of state | 1 | (1) |

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illness and/or physical impairment are often unable to request help. Misguided sympathy in the form of denial and avoidance by family, friends, and associates of the impaired physician will allow the condition to deteriorate. Effective treatment of these disorders is available and can be obtained when the disease is detected early.

If you suspect that you, a colleague, a friend or a relative is impaired, call the confidential hotline at 1-800-274-0933. In St. Louis call 995-4990. All communications are kept strictly confidential. Jack Croughan, MD serves as Medical Director of the MPHP and Karen Sanders, BSN, RN, is the Program Coordinator. Currently the American Medical Association is developing a similar program with its main emphasis on developing a rehabilitation relief fund to provide loans and grants to physicians and their families.

## RESULTS

There are approximately 10,000 licensed physicians in Missouri with 6,300 being members of the Missouri State Medical Association. The number of referrals to the program to date is 175. There were 39 in 1990; 54 in 1991; 41 in 1992 and 41 in 1993. The current number of physicians enrolled in the program is 75 (Table 1). The other 100 physicians either completed the program, moved out of the state or did not enroll after referral. Distribution as to specialties, cause of impairment and geographic location is summarized in Table 2. Table 3 summarizes the current status of participants.

## DISCUSSION

A typical participant would be a male primary care physician from one of the major metropolitan areas and who was referred by a colleague, hospital or Board of Healing Arts for help in dealing with possible impairment from either drugs or alcohol.

**TABLE 3**

**Current Status of Participants: N=75**

| | (N) | (%) |
|---|---|---|
| Stable and working well within the program | 69 | (92) |
| License currently suspended but in stable recovery | 2 | (3) |
| Currently being retreated or experiencing recent relapse | 4 | (5) |

## CONCLUSION

The Missouri Physicians Health Program (MPHP) is an independent, voluntary and confidential service provided to Missouri physicians suffering from alcoholism, drug abuse or psychiatric illness. The program's main purpose is to facilitate the physician's return to healthy functioning, both personally and professionally. Recovery in the physician has been reported to be 80% versus 50% in the general population.[3,4] Recovery is higher in physicians than in the general population. At present 92% of MPHP participants are compliant with monitoring requirements and stable in recovery.

## ACKNOWLEGMENT

The authors would like to acknowledge G. Douglas Talbott, MD (Atlanta, GA); Richard M. Steinhilber, MD (Cleveland, OH); Christie S. Bohigian (St. Louis, MO); Paula Oye (St. Louis, MO) for their technical assistance and review of this manuscript.

**Editor's Note:** Dr. Bohigian's interest in this article was stimulated by helping organize a colleague's intervention.

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## The Authors

**George M. Bohigian, MD,** is in private practice and is a Professor of Clinical Ophthalmology, Department of Ophthalmology and Visual Sciences Washington University School of Medicine/Barnes Hospital, St. Louis, Missouri.

**Jack L. Croughan, MD,** is the Medical Director of Missouri Physicians Health Program.

**Karen Sanders, RN,** is the coordinator of Missouri Physicians Health Program.

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Recently, Dr. Mike Ribaudo informed me that in 1988 when he started his first surgi-center in St. Louis, he was politely told by his peers that he would not be able to compete with the hospitals because of their deep pockets. Five years later his surgi-centers performed more outpatient surgery than Barnes Hospital! During this whole process he learned the one very important lesson, and that was the importance of devoting time to management and leadership. He went on to state: "at the beginning I found myself trying to run a busy practice, manage and develop the surgi-center, and have a social and family life. It became apparent that I needed to reset my priorities. I decided to slow down on my clinical activities and concentrate on the management and development of the surgi-center, and now I am on the road to success."

In summary, the recipe for the success of physicians to manage and direct the change process, includes the following ingredients:

- physicians efforts must be always patient focused, with the patients being their best political allies and advocates,
- physicians must focus on the health care needs of the local community,
- resource must be allocated to support a well organized and well managed group of physicians,
- groups must have a designated physician leader, who must be compensated for his or her administrative and executive responsibilities,
- the leader must be one who is visible within the community and one who has the time, commitment and skill to network with other groups to form the basis of a large body of well organized physicians at the local level or community level, and
- change and growth should be incremental through existing groups or the formation of groups. Networks of groups or megagroups will have the leverage to bargain, barter and negotiate much more effectively than loosely federated IPAs, small groups or even PHOs.

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2. Bennis, W. *On Becoming a Leader.* Mass.: Addison-Wesley, 1989, pp 39-41.

**Suggested reading: *On Becoming a Leader.* Warren Bennis, Addison-Wesley Publishing Company, 1989.**

*I wish to acknowledge Lewis Vollmar, Jr., MD, MBA, MA, for his help with this paper.*

This is the first of a series of articles from Tom Bennett on leadership and organizational development.

# Tools for the Internet

Melissa J. Poole and Mary Ellen Sievert, PhD

In January in this column, Drs. Patrick and Sievert shared with readers the potential the Internet offers for electronic communication for medical professionals, which is, unquestionably, an invaluable resource. Through personal mail and special interest discussion lists, you can share information with peers throughout the world. Yet the Internet is more than an electronic version of the US Postal Service; it provides access to many more rich information resources, from access to the catalogs of major research libraries to the latest weather report for the city where you will be attending a conference tomorrow.

Many of the commercial providers such as America Online and CompuServe, who, in the past, only provided e-mail connections to the Internet, are now looking into providing increased Internet access. Delphi, for instance, now provides access to a wide range of Internet services, including FTP, gopher, telnet, Usenet newsgroups, and World Wide Web, as well as e-mail. You may already have access to all these services at no cost if your institution has direct access to the Internet through the Missouri Research and Education Network (MOREnet).

So how can you find all these great resources without ever leaving your desk? This article is intended as a brief overview of tools for accessing this information. For more complete information, we refer readers to a number of books listed in the bibliography.

## TELNET

Telnet is a program that allows you to remotely login to another host computer to use its resources as though you were a local user. For instance, you can telnet to the Library of Congress Information System (LOCIS) and search for books in the Library of Congress, federal legislation, and copyright information. Indeed, you can telnet into most, if not all, of the larger research libraries in the world and search their catalogs. You can also telnet into a number of computers that provide access to large databases such as at NIH. Even Medline is now available for searching from your desktop through the Internet by telnetting to MEDLARS.NLM.NIH.GOV. You must have an account established for billing services and an id and password to access the system. For information about establishing an account, e-mail to: REF@NLM.NIH.GOV. Anonymous telnet sessions are generally not available, but special usernames are sometimes created for public usage.

## FTP

File Transfer Protocol (FTP) is a tool that allows the user to retrieve files made available to the public over the Internet. Those files can range from simple text to graphics to software. The general practice is for the user to login as "anonymous" and to give his or her full Internet address when asked for a password. This practice allows administrators to keep track of who is accessing the information.

One tremendously useful resource for health care professionals available by FTP is The Medical List. It lists Internet services for members of the medical community, including medical mailing lists, Usenet newsgroups, FTP resources, data archives, gopher resources, and World Wide Web servers, as well as instructions on how to access these services. To get the list, ftp type ftp2.cc.ukans.edu pub/hmatrix/ then go to the file medlst94.txt. The list is extensive and is updated regularly.

## TOOLS FOR SEARCHING

### ARCHIE

How can you learn about interesting and useful information at FTP sites? One way is simply to watch for notices posted by colleagues on various newsgroups and mailing lists. Another, more direct way, is to search for files using Archie. Archie is a piece of software that allows users to search the database of all the publicly accessible files on servers that accept anonymous FTP. So, for instance, if you had heard from a colleague about The Medical List but didn't know where to get it, you could do an Archie search and find the address of where to FTP it. Archie is particularly useful in finding software, like WS FTP, a Windows-based interface for FTP, or hypertext browsers like Mosaic, discussed below.

### GOPHER

Gopher is a piece of software developed at the University of Minnesota (and named after its mascot) that organizes information on the Internet in a series of hierarchical menus. The Center for Advanced Medical Informatics at Stanford (CAMIS.STANFORD.EDU) is a good place to begin to enter gopherspace and medical resources available through gopher. Some other good gopher resources include the RuralNet gopher at the Marshall University School of Medicine in Huntington, Virginia (RURALNET.MU.WVNET.EDU) and the Family Medicine gopher at Gustavus Adolphus College (GOPHER.GAC.EDU).

### WWW

The World Wide Web (WWW) makes accessing information on the Internet easier through the use of hypertext. A good deal of the time when you begin research, you're not quite sure what you're looking for; one find leads to another until you reach the answer. You read an article and find concepts you want to know more about, so you find the references they cited, and then those they cited, and so on. WWW uses the something of the same search strategy, linking key words and phrases to other documents that will tell you more. These texts are then linked to other texts, and so on. Hence, the metaphor of a "web" of information. Hypertext allows the same information to be arrayed in a number of ways, allowing you to pursue the matter that is most of interest to you, rather than forcing you to proceed linearly through the entire text.

### MOSAIC

There are a number of browser interfaces that make your navigation of the Web much easier. The most popular one is Mosaic. Mosaic provides a graphical interface to the Web making possible the linkage of not only text-based files, but also images (both still and video) and sound. Designed at the National Center for Supercomputing Applications (NCSA) at the University of Illinois at Urbana-Champaign, it runs in Microsoft Windows, X Windows, and MacIntosh environments. Two sites of particular interest to the medical community are the Educational Technology Branch of the National Library of Medicine (HTTP://WWWETB.NLM.NIH.GOV) and the University of Iowa's Virtual Hospital (HTTP://INDY.RADIOLOGY. UIOWA.EDU).

In short, there is a wealth of information out there and a great number of strategies for navigating the net. The best way to learn more is to get online and start searching!

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### ACKNOWLEDGEMENT

This article was supported in part by grant number LM07089 from the National Library of Medicine. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the National Library of Medicine.

### The Authors

**Melissa J. Poole** is a pre-doctoral fellow in Medical Informatics at the University of Missouri-Columbia. **Mary Ellen Sievert** is an associate professor in the School of Library and Information Science at the University of Missouri-Columbia.

* * *

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# Ophthalmology Quiz #6

John C. Hagan III, MD

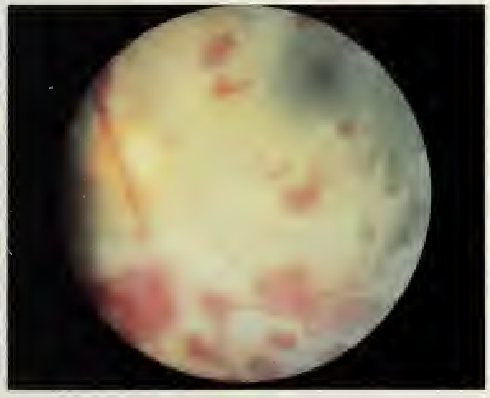


Figure 1

**CASE 1.** A six-month-old infant was brought semi-conscious to the Emergency Room. The child rapidly deteriorated and died. Figure 1 was obtained after death and is a photo of the infant's retina. Choose the best diagnosis from the following:

- **a. Retinal hemorrhages from acute leukemia**
- **b. Toxoplasmic retinitis**
- **c. "Shaken Baby" Syndrome (child abuse)**
- **d. Sickle cell retinopathy**

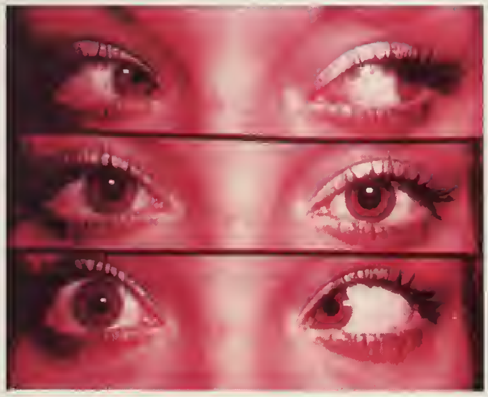


Figure 2

**CASE 2.** This eight-year-old child recently recovered from a severe ear infection. She now complains of horizontal double vision at distance. She does not see double when reading or looking at nearby objects. In Figure 2, she is being asked to look (top to bottom) to her right, straight ahead and to her left. Choose the best diagnosis from the following:

- **a. Third cranial nerve (Oculomotor) paresis**
- **b. Fourth cranial nerve (Trochlear) paresis**
- **c. Sixth cranial nerve (Abducens) paresis**
- **d. Seventh cranial nerve (Facial) paresis**

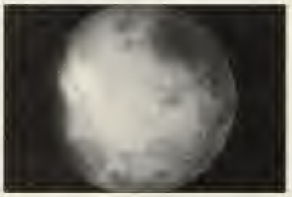
**(See answers on next page.)**

**The Ophthalmology Quiz is produced and coordinated by John C. Hagan III, MD, Director, Midwest Eye Institute of Kansas City, Inc., North Kansas City, Missouri. Financial support for this feature is provided by ALCON SURGICAL, North Kansas City Hospital, Missouri Ophthalmological Society, Inc., CHIRON, Inc., MERCK & CO. Inc., O. H. Gerry Optical Co. and IOPTEX , Inc.**

# OPHTHALMOLOGY QUIZ ANSWER

(Ophthalmology Questions are on previous page.)

## CASE 1. ANSWER
### 1) c. "Shaken Baby" Syndrome (child abuse)



This child also had a sub-dural hematoma in addition to numerous retinal hemorrhages. The parents were charged, convicted and imprisoned for the child's death.

Each year, an estimated 2,086,000 children are the victims of child abuse or neglect. At least 1,200 children die from maltreatment. Forty percent of abused children will demonstrate Ophthalmic manifestations of trauma. Ophthalmology consultation should be obtained in all suspected cases, even post-mortem eye examinations can be helpful.

"Shaken Baby" Syndrome is a specific form of child abuse. Violent shaking causes severe injury in infants, but the diagnosis is often difficult to make because of the lack of obvious external signs. The diagnosis of shaken baby syndrome can be made if the following three conditions are met:

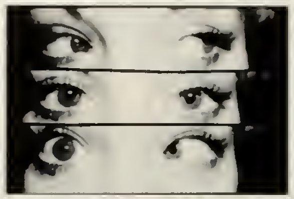
1. **The infant has signs of head injury, such as subdural or subarachnoid hemorrhages, cerebral edema or skull fractures.**
2. **Retinal hemorrhages are present.**
3. **The injuries are consistent with shaken baby syndrome and there is not another obvious cause of injury.**

The shaken baby syndrome should be considered in infants presenting with seizures, failure to thrive, vomiting associated with lethargy or drowsiness, hypothermia, bradycardia, hypertension or hypotension, respiratory irregularities, coma or death. Shaken babies are usually less than one year old, and most are under six months of age.

*References*

1. Spaide RF, Swengel RM, Scharre DW, Mein CE, Shaken Baby Syndrome. *AFP* 1990;41:1145-1152.
2. Marcus DM, Albert DM. Recognizing child abuse. *Arch Ophthalmol* 1992;110:766-768.

## CASE 2. ANSWER
### 2) c. Sixth cranial nerve (Abducens) paresis.



Paralysis or weakness of the Sixth cranial nerve causes underaction of the lateral rectus muscle on the side of the lesion. An observant patient will notice horizontal diplopia at distant but not at near. The diplopia will be worse when they look toward the side with the paretic lateral rectus. The diplopia of a Fourth cranial nerve paresis will have a vertical component. A Third cranial nerve paresis will have lid and pupil signs in addition to double vision. Seventh nerve paresis will not experience double vision.

This case is an example of a sixth cranial nerve paresis caused by a middle ear infection (Gradenigo's syndrome). Middle ear infection associated with petrositis and edema of its dura pinches the sixth nerve against the petrosphenoidal ligament (Gruber's ligament) as it passes between it and the dura. The frequency of repeated episodes of palsy is high; the duration is usually brief because of antibiotics and improvement is usually obvious within three to six weeks. In other cases of sixth nerve paresis an underlying cause needs to be excluded.

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# Medical Mission in Haiti

Angela M. Allen, Editorial Assistant

*"It is a short distance from the United States and there is a system in place for visiting physicians to help even during brief visits. It is a cost-effective place to provide care."*

Hank Macler, MD, an anesthesiologist from St. Louis, is a regular traveler to Haiti. His visits are usually longer but the political climate causes uncertainty about even being able to enter the country. This visit was a brief weekend trip to help his friend, Hollis Clark, MD, with infant cataract surgery.

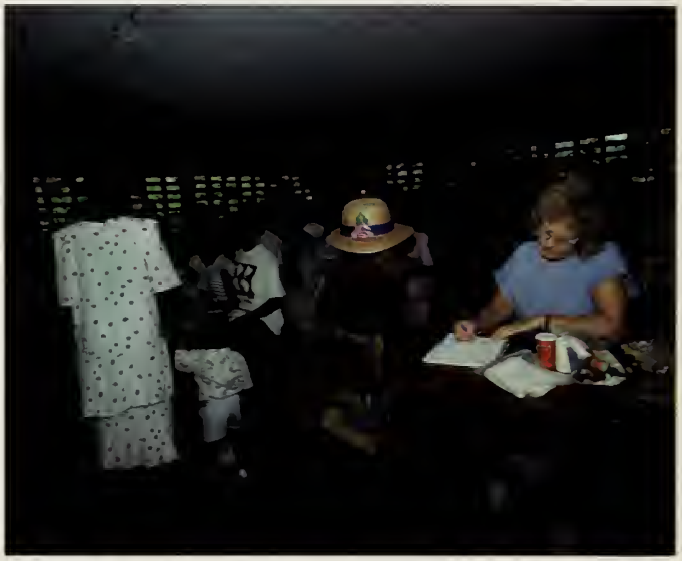
Once in Cap Haitien he found it to be as peaceful as he has always known it to be. Not much had changed since the last time he was there. "The people are not as joyful," Dr. Macler said. "It is the poor who are getting poorer as a result of the sanctions."

Dr. Clark knows that he has to keep visiting physicians happy in order to work them to their peak capacity and more importantly, have them want to return. Hollis starts his friend Dr. Macler out by getting him settled at the Mont Joli Hotel where they can have a quick meal before starting surgery. The hotel is an oasis with electricity, clean water and food, even a swimming pool. It provides visiting physicians with a comfortable place to recuperate so that their energy can be focused on providing care.

Dr. Clark sits down to lunch, hoping for pepper steak, an item that has returned to the menu after an outbreak of anthrax hit the island months ago. But he doesn't stay long enough to eat before he is headed back to his busy clinic to prepare for an afternoon of surgery. Dr. Macler describes Hollis as, "a man with unbounded energy."

Hollis and Wanda Clark have been missionaries in Haiti for over twenty years. When he saw the need for ophthalmology Dr. Clark returned to the states for training. With the support of the American Baptist Foreign Mission Society and suppliers like Dr. Macler's nonprofit corporation, Friends of Haiti, he opened the Baptist Eye Center in Cap Haitien.

The clinic receives 200 to 300 patients a day. He and an associate Haitian physician, Dr. Carmelle Lucian, perform surgery on adults using a local anesthetic. When an anesthesiologist can come to Haiti and provide general anesthetics, Dr. Clark pulls together a caseload of children who need the surgery due to trauma to the eye or infants born blind as a result of malnutrition.



Up to 200 people a day wait in long lines with numbered slips of paper to receive care. The people gathered at this church have walked over a mountain to get to the clinic. It is not unusual to walk 20 miles for care in Haiti.

The Eye Center is staffed by Haitians, most of whom Hollis has chosen from poorer backgrounds. He wants to give opportunity to those who do not have a chance. He refers to them as he does himself, "smart peasants with a great work ethic."

Dr. Clark helped Carmelle receive training in the States and will assist her in any educational endeavor that she desires. She is currently second in her law school class. He hopes that she will continue to use her skills to help the Haitian people, but understands the pressures to leave. He would like for her to open another eye clinic to treat the wealthier patients who complain about the long lines at the Eye Center.

Thursday afternoon Dr. Macler arrived at the Eye Center with an entourage of reporters. An article about the clinic by Bill Lambrecht and Jim Forbes appeared in the May 17th *St. Louis Post Dispatch.*

The building is packed with people waiting in long lines to see Dr. Clark. In the front area of the clinic several staff members test eyesight and take ocular measurements. Through a door to the back of the clinic, two patients sit in their mothers' arms in chairs along the wall of a stocked supply room. Past this cramped room is an area for disin-

Dr. Carmelle Lucian performed all of the surgery with each case taking about two hours to complete. After each procedure Dr. Clark admired her work, he commented, "just because you live in a poor country is no excuse for poor work."

Renell is the last case. He and his father had been waiting in the supply room all day. He started to get upset before the anesthesia was administered so Dr. Clark comforted him with conversation about the boy's sister who likes to eat peanut butter.

Haitians are artistic and proud. Dr. Macler bought artwork and gifts at a marketplace. Acknowledging their work and talent as well as a spending money is another way he enjoyed helping the people.

Haitians face dentistry as they do life, with a great deal of stoicism. Bernell Pudwill has performed more the 90,000 teeth extractions at his clinics.

fecting instruments and preparing for the OR. A swinging wooden door separates this area from a fairly sophisticated operating room.

In the room are two homemade wooden operating tables with the legs cut to Dr. Clark's and Dr. Lucian's height. Supplies such as paper gowns are reused and drugs are diluted, but no expense is saved when it comes to items such as adjustable chairs for long operating hours and precision instruments costing thousands of dollars.

The OR is one of the few places in Cap Haitien with electricity. Finding fuel to run the generator is time-consuming and costly during the current embargo. At the time gasoline being smuggled over the Dominican Republic's border costed over $10 a gallon.

Dr. Clark brought in a boy who wanted to thank Dr. Macler. Moses received cataract surgery the last time Hank was there. The results of cataract removal are seen the day following surgery when the children can see, many for the first time. "The most rewarding part of coming to Haiti is watching their smiles grow from ear to ear when the bandages are removed," Dr. Macler said.

The physicians opened the two suitcases carrying medical supplies that came with Dr. Macler. Much of the sup-

Continued on page 246

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plies were gathered "Radar O'Reilly-like" by a friend in Missouri. Fortunately, Dr. Macler brought another infant monitor on the plane because the one he had shipped earlier did not arrive. Over an hour later everything is ready for surgery. The first patient is asleep and stable and Dr. Lucian is in position. An assistant leads the surgical team in a prayer before starting.

"The dance" is how Dr. Clark describes the interaction of the surgical team. Dr. Lucian tells Dr. Macler when she will finish. It is important to bring the patient out of the anesthesia as quickly as possible so that as many surgeries can be accomplished as is possible.

Two children received cataract surgery that afternoon without a problem. Surgery was over by 6:30 p.m. which is early for Dr. Clark who has been known to continue to late into the night.

Friday morning surgery resumed at 8 a.m. with the removal of a diseased eye in a teenage girl. Dr. Clark is excited that the prosthetic eye will help her self-image and as he puts it, "get her married."

The older children were easier to anesthesize than the infants. A combination of poor nutrition and dehydration made it difficult to introduce an IV. One infant would not stabilize and had to be brought out from anesthesia and the surgery rescheduled. It is a frustrating experience but they could not afford to take risks. The two physicians consulted about when to tell the mother to bring her child back. It is hard to explain to the woman who has paid $50 for the surgery and probably twice that to travel to the clinic that her child's procedure would not happen that day. One way to handle the situation is to assure her that her child will be the first to receive surgery next time. The disappointment started Dr. Macler to consider returning in August.

Two more children are able to have cataract surgery before the team calls it a day. The last patient took hours to recover from the anesthesia. Keeping the electricity on for a day of surgery can cost around $600 for the day or $2,000 for the week. While the boy's recovery gave two friends a chance to do some catching up, it was at great expense. Wanda Clark's current project is searching for the necessary hardware to set up solar panels so that they can break the clinic's dependence on fuel.

Dr. Macler also brought medical supplies for another friend, Bernell Pudwill. Bernell and Delores Pudwill provide health care three days a week at mobile clinics on the outskirts of Cap Haitien and further into the countryside.

Bernell, who was originally a pastor in South Dakota, began employment at a hospital learning as much as he could there and from missionary doctors. Delores enrolled in nursing courses and became an LPN. They have lived in Haiti for the past 25 years.

Two hundred people a day are treated at the mobile clinics. Haitians assist taking medical histories, administering drugs, and performing procedures. Delores diagnoses while Bernell provides dental and general medical needs. He sees 25 to 30 people an hour. They treat everything from worms to malaria and typhoid. In Haiti there is a great need for gynecological and general surgery. One day a week, Bernell performs minor surgical procedures that are possible under only local anesthetics.

***"Shape and channel your energies and resources. The people are better served in an ongoing effort rather than episodic. There are a lot of logistics to work out with medical missions - things don't just happen."***

In 1984 the Pudwills left their missionary group. Their independence allows them to focus energy on projects that improve the infrastructure of communities. Bernell finishes his clinical duties before noon so that he can concentrate the rest of the day on his rice and corn mill. He transports grain, a necessity during the fuel embargo. He also drills wells to supply fresh water.

They are tirelessly devoted to their work because as Delores says, "unless you connect yourself in a total way you cannot improve the situation."

Why Haiti? Dr. Macler said, "I left with tears in my eyes after the first trip. There is such a great need for care and it was very satisfying. Also, I receive a great amount of inspiration from my friends [the Clark's and Pudwills]."

Another reason is logistics. "It is a short distance from the United States and there is a system in place for visiting physicians to help even during brief visits. It is a cost-effective place to provide care," he said.

Someday he would like to spend two or three months there a year. But for now he is content with two to three trips a year, and being an outside coordinator and facilitator. His advice to those who want to help, "shape and channel your energies and resources. The people are better served in an ongoing effort rather than episodic. There are a lot of logistics to work out with medical missions - things don't just happen."

Dr. Macler is organizing a group of physicians for a trip to Haiti in January. "It will be an opportunity for them to practice medicine in a whole new dimension," he said, "it is what medicine was 70 or 80 years ago, which requires you to know the history of your trade. Just one example was a woman brought in with an ectopic pregnancy. She had bled out before she could be operated on. Without a supply of blood, we had to think back to early transfusion medicine, gather her own blood and return it to her."

Haiti is a great experience for all types of health care providers, as he puts it, "many of the problems such as availability, accessibility and cost-effectiveness parallel the problems of health care in the United States. There may be answers from the hospitals in Haiti that have been open for over twenty years operating on minimal budgets providing care to a large number of people, often for free."

"This opportunity may not be for everyone. I've often thought if I were going to write a want ad for physicians to come down it would include the words adventurous, hardworking, adaptable, and problem-solving," Dr. Macler said. ■

# Diabetes-related End-stage Renal Disease in Missouri: Trends and Variations by Age and Race

Alina Urriola-Acheson, MD, Donald J. Sharp, MD, DTM&H, Karl H. Kruse, MSPH,
David E. Austin, BA Angelia Weaver, MPA and Ross C. Brownson, PhD

**Diabetes-related end-stage renal disease (ESRD-DM) is a major source of morbidity and medical costs. The authors studied patterns of ESRD-DM in Missouri during the period 1985-1992. The incidence of ESRD-DM increased during this period, with the largest increase in older age groups. ESRD-DM is substantially more common among blacks than among whites. Enhanced efforts are needed to improve detection and control of diabetes and its complications, especially in high-risk populations.**

End-stage renal disease (ESRD) has been defined as the stage of renal impairment that requires dialysis or kidney transplantation to maintain life.[1] Diabetes mellitus is the leading cause of ESRD in the United States. Approximately one third of ESRD cases reported annually are caused by diabetes.[2]

The reported incidence of ESRD has sharply increased since 1972, when Public Law 92-603 was enacted.[1,3] This law made treatment of ESRD available through the Medicare program to nearly all United States citizens, including those with multisystem diseases.[4,5] Treatment of ESRD-DM imposes a substantial financial burden on the health care system because annual dialysis treatment for one patient with ESRD-DM costs more than $35,000. Kidney transplantation can cost from $30,000 to $70,000, with required annual follow-up care averaging about $8,000.[6] According to data from the Health Care Financing Administration, the cost to Medicare for the treatment of ESRD due to diabetes (ESRD-DM) in Missouri in 1990 was $15,985,000.[7] This figure does not include some costs, such as coinsurance, drugs, transportation, and the costs of disability and reduced life expectancy.

The Missouri Diabetes Control Program (MDCP), funded by the Centers for Disease Control and Prevention (CDC), is working with other public health agencies to reduce diabetic complications among high-risk populations.[8] In an effort to define the burden of diabetes in Missouri, the program examines sources of data about diabetes-related morbidity, mortality, disability, and costs, with a goal of establishing a surveillance system for accurate monitoring of the disease. The information from the surveillance system will be used for program planning and evaluation. The state of Missouri has adopted an objective of reducing the incidence of ESRD-DM to no more than three cases per 100,000 population by the year 2000.[9]

In this paper we report trends in the incidence of ESRD-DM in Missouri during 1985-1992 and assess the incidence rates of ESRD-DM by demographic subgroups.

## METHODS

The Missouri Kidney Program (MoKP) was created by the Missouri Legislature to provide financial assistance to patients with ESRD for services not covered by Medicare or Medicaid. In 1992, 57% of Missouri patients treated for ESRD received financial support from MoKP.[10] The MoKP is operated and administered by the University of Missouri in Columbia. The MoKP maintains a data bank with demographic, geographic, diagnostic, and treatment information on Missouri residents who received ESRD therapy since 1968 within the state or in adjacent states, including patients not receiving financial support from the MoKP. Data are provided on a monthly basis to the MoKP as a contractual obligation to receive reimbursement by all dialysis centers and transplant units in Missouri and those treatment facilities in adjoining states that treat Missouri patients.[10]

To examine trends and assess the incidence rates of ESRD-DM by demographic subgroup, we classified data compiled by the MoKP for years 1985 through 1992 by age group, sex, and race. In addition, we divided the data into two clusters of 4 years each

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(1985-1988 and 1989-1992) to compare the age distribution over time. Incidence was defined as the number of patients initiating treatment for ESRD-DM per year. Incidence rates were calculated both by individual year and averaged over the 8-year period by using yearly population estimates obtained from the State Center for Health Statistics. Incidence rates were age-adjusted to the 1940 standard population by the direct method and expressed per 100,000 population.

**Table 1. Age-Adjusted Incidence per 100,000 of Total End-Stage Renal Disease and End-Stage Renal Disease-DM, by Year-- Missouri, 1985-1992**

| | Total ESRD | | ESRD-DM | | |
|---|---|---|---|---|---|
| Year | Rate | (n) | Rate | (n) | % ESRD-DM * |
| 1985 | 11.5 | (673) | 3.8 | (211) | 31 |
| 1986 | 12.3 | (723) | 3.7 | (200) | 28 |
| 1987 | 13.6 | (826) | 4.1 | (237) | 29 |
| 1988 | 14.0 | (854) | 4.3 | (248) | 29 |
| 1989 | 15.5 | (952) | 529 | (304) | 32 |
| 1990 | 16.8 | (1,068) | 5.0 | (299) | 28 |
| 1991 | 17.0 | (1,108) | 4.8 | (300) | 27 |
| 1992 | 18.4 | (1,232) | 5.8 | (359) | 29 |

*Percentage of all ESRD cases that are ESRD-DM.

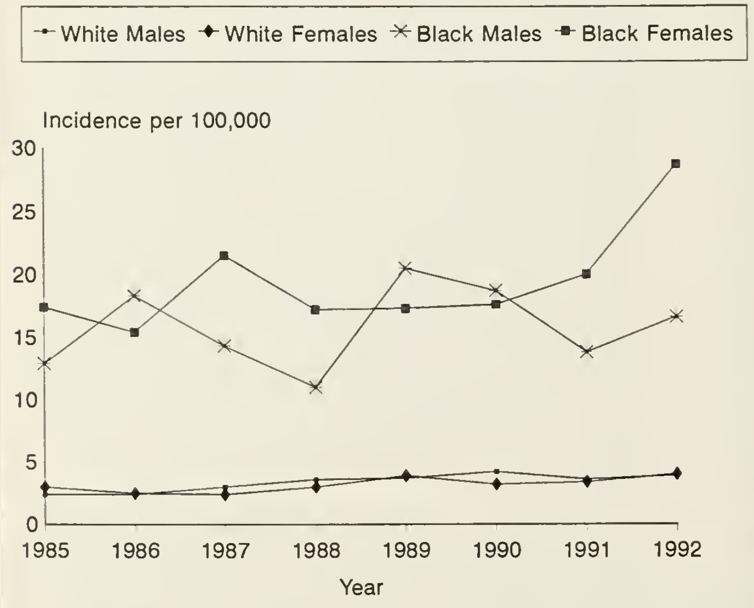

**Figure 1. Age-Specific Incidence per 100,000 of End-Stage Renal Disease-DM, by Year--Missouri, 1985-1992**

## RESULTS

During 1985-1992, 7,436 patients initiated treatment for ESRD in Missouri. Of these patients, 2,158 (29%) were classified as having ESRD-DM. The number of patients reported with diabetic nephropathy who initiated treatment for ESRD almost doubled during this time period, from 211 in 1985 to 359 in 1992 (Table 1). The age-adjusted incidence rate of ESRD-DM increased by 53%, from 3.8 per 100,000 population in 1985 to 5.8 in 1992. The percentage of all ESRD cases due to diabetes remained almost constant during the study period, with a mean of 29%.

The largest relative increases in the rate of ESRD-DM occurred for the age groups 65-74 years (113% increase) and ≥75 years (119% increase) (Figure 1). Comparison of the two time periods (1985-1988 and 1989-1992) by age revealed a 20% increase in the incidence of ESRD-DM in persons <64 years versus a 70% increase in persons ≥65. However, 63% of all incident cases from 1985 to 1992 occurred among those <65 years old. Of those, 71% occurred among 45- to 64-year-old persons.

The incidence of ESRD-DM was substantially higher among blacks than among whites for each year analyzed (Table 2). The difference in risk between blacks and whites increased from 12.9 per 100,000 population in 1985 to 14.1 in 1986, then remained relatively stable until 1992, when it rose to 19.6. Rates of ESRD-DM were highest among black females and lowest among white females (Figure 2).

## DISCUSSION

Our examination of the increasing incidence of ESRD-DM in Missouri raises several important issues. We found an increase in the incidence rate of ESRD-DM in all age and racial groups that corresponds to the increase in national data.[1,11-13] This increase may reflect increases both in the true incidence and in the treatment of this disease.[1,13] An increase in the true incidence of ESRD-DM could result from an increase in diabetes. However, the self-reported incidence of diabetes in the United States only increased approximately 3% from 1980 to 1990, the most recent years for which national surveillance data are available.[13] Because this increase is far less than the increase in ESRD-DM rates, other factors must be involved, such as the utilization of treatment, which may reflect both availability and changes in eligibility criteria.[1,13]

We found a considerable increase in the incidence rate of ESRD-DM in the older age groups. Although it is not fully understood, this increase is considered to be due largely to a series of changes in eligibility criteria.[14]

We found a substantially higher incidence of ESRD-DM among blacks than among whites. This difference cannot be explained by racial differences in the prevalence of diabetes.[1,11,13,15,16] Cowie et al. [16] studied this disparity and found that blacks with diabetes progress faster to ESRD than do whites. Elements that may account for the racial differences in ESRD-DM include greater severity of diabetes, and higher prevalence of uncontrolled diabetes and hypertension resulting from less access to preventive care and treatment.[15,16]

A limitation of this study is that the incidence of ESRD-DM presented in our data represents only those persons who start treatment for ESRD and whose primary diagnosis is diabetes. Therefore, it does not include patients with ESRD-DM for whom 1) diabetes is not recorded as the primary underlying disease, 2) a physician does not recommend treatment, 3) access to treatment is lacking, or 4) treatment is declined. Studies conducted in the 1980's estimated that about 70% of all cases of ESRD were treated[17,18] but this percentage is thought to have increased in recent years.[19]

The findings in our study strongly support the need for increased prevention activities directed at the high-risk groups of blacks and the elderly. Because renal disease appears late in the course of diabetes, prevention programs for ESRD should emphasize activities by primary care providers toward early diagnosis of diabetes, screening of persons with diabetes to detect early signs of renal impairment, maintained adequate control of blood sugar levels and blood pressure, and education of individuals and the community.[5]

The important role of the clinician in this prevention plan was greatly emphasized by the results of the Diabetes Control and Complications Trial completed in 1993. This multicenter, randomized, controlled clinical trial found that patients with insulin-dependent diabetes who were provided with intensive monitoring and control of blood glucose were significantly less likely to develop renal disease and to have slower progression of renal disease if it developed.[20] Another recent study further emphasized the importance of the clinician's role by demonstrating slower progression of renal disease in diabetics with preexisting renal disease when treated with the drug captopril, an angiotensin-converting-enzyme inhibitor.[21]

The MDCP collaborates with community health centers in St. Louis, Kansas City, and New Madrid to conduct community-based projects to reduce complications of diabetes through patient education and early detection. The MDCP plans to use ESRD-DM data in combination with information from other sources to further define target populations and priority areas for future prevention projects.

Continued on page 290

Table 2. Age-Adjusted Incidence per 100,000 of End-Stage Renal Disease-DM by Race and Year--Missouri, 1985-1992

| | Blacks | | Whites | | |
|---|---|---|---|---|---|
| Year | Rate | (n) | Rate | (n) | Difference |
| 1985 | 15.5 | (75) | 2.6 | (130) | 12.9 |
| 1986 | 16.6 | (78) | 2.5 | (118) | 14.1 |
| 1987 | 18.3 | (93) | 2.8 | (141) | 15.5 |
| 1988 | 14.5 | (72) | 3.2 | (170) | 11.3 |
| 1989 | 18.8 | (93) | 3.9 | (206) | 14.9 |
| 1990 | 18.1 | (91) | 3.7 | (197) | 14.4 |
| 1991 | 17.4 | (90) | 3.5 | (200) | 13.9 |
| 1992 | 23.6 | (124) | 4.0 | (218) | 19.6 |

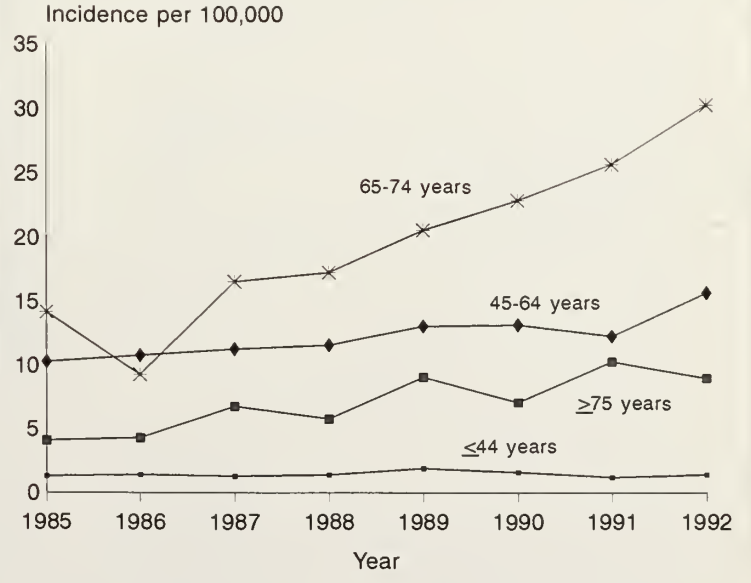

Figure 2. Age-Adjusted Incidence per 100,000 of End-Stage Renal Disease-DM, by Race, Sex, and Year--Missouri, 1985-1992

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## ACKNOWLEDGMENTS

The authors thank numerous persons who made this study possible: Bruce Gibson, from the State Center for Health Statistics, Missouri Department Of Health (MDOH), for invaluable assistance in data analysis; and Dr. Arthur E. Rikli, University of Missouri, for his input in the development of this project; and A. Neal Sprick, MDCP, MDOH, for help in all phases of the study.

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## The Authors

**Alina Urriola-Acheson, MD,** is from the Department of Community and Family Medicine, Saint Louis University Health Science Center, St. Louis, Missouri. **Angelia Weaver, MPA,** and **Ross C. Brownson, PhD,** are from the Division of Chronic Disease Prevention and Health Promotion, Missouri Department of Health, Columbia, Missouri. **Donald J. Sharp, MD, DTM&H,** is from the DCDPHP and the Epidemic Intelligence Service, Epidemiology Program Office, Centers for Disease Control and Prevention, Atlanta, GA. **Karl H. Kruse, MSPH,** and **David E. Austin, BA,** are from the Missouri Kidney Program, University of Missouri-Columbia, Columbia, Missouri.

**Reprint request to Dr. Brownson, Division of Chronic Disease Prevention and Health Promotion, Missouri Department of Health, 201 Business Loop 70 West, Columbia, MO 65203; Tel. (314) 876-3200; FAX (314) 443-3592.**

# DIABETIC NEPHROPATHY:

## *Is a pound of treatment better than an ounce of prevention?*

**David E. Goldstein, MD,** *Professor of Child Health, Internal Medicine, and Pathology at the University of Missouri Health Sciences Center, and Attending Physician at Children's Hospital at University of Missouri Hospital and Clinics*

Diabetes Mellitus is a chronic disease that affects about 3% of the U.S. population.[1] Yet, as demonstrated in this article, it is the most common cause of ESRD in Missouri as it is in the rest of the U.S. The statistics are depressingly similar for other chronic complications of diabetes such as visual loss and amputations.

Diabetes accounts for one out of every seven health care dollars spent in the U.S. It was estimated at $85 billion dollars in 1992.[1] Per capita annual health care expenditures in 1992 were more than three times greater for diabetics ($9,493) than for nondiabetics ($2,604). By far, the largest share of the costs is for hospitalization to treat diabetic complications, particularly ESRD. If ESRD and other chronic complications of diabetes can be prevented, the savings in terms of both human suffering and dollars would be considerable.

Recent studies show that progression of diabetic nephropathy to full ESRD can be slowed by intervention, including the use of angiotensin-converting-enzyme inhibitors.[2] But, such an approach requires that diabetic patients with early renal changes be identified and that long-term treatment be instituted. One major problem with that strategy is that many patients with diabetes do not have ready access to appropriate medical care and many who have access cannot afford the treatment. Ironically, once diabetic patients do develop serious complications such as ESRD, help is available through state and/or federally-funded programs. Wouldn't it be better to make relatively low cost interventions readily available if they can obviate the need for late, high cost interventions?

An even more attractive strategy than early identification and treatment of complications would be to have effective and efficient screening programs that would allow diagnosis of diabetes and treatment at an early stage, long before any complications had developed. The American Diabetes Association (ADA) has recommended routine screening for diabetes in high risk populations (this includes persons with a family history of diabetes; obesity; race-American Indian, Hispanic, or Black; age > 40 yr plus any of the preceding factors; previously identified impaired glucose tolerance or IGT; hypertension or significant hyperlipidemia; and women with a history of gestational diabetes or delivery of babies > 9lb).[3] It is time for Missouri to consider implementing a screening program based on the ADA recommendations, particularly given the recent report of the Diabetes Control and Complications Trial linking the degree of chronic hyperglycemia to the risk of developing chronic diabetic complications of the eyes, nerves, and kidneys.[4] Of course, unless patients have ready access to high quality health care, screening for diabetes would be an academic exercise.

The Missouri Diabetes Control Program should be applauded for alerting all of us to the increasing public health problem of ESRD-DM. The Missouri Legislature should also be applauded for creating the Missouri Kidney Program, which provides financial assistance to patients with ESRD for services not covered by Medicare or Medicaid. While these important programs will continue their good work, it's like the old television ads promoting regular replacement of inexpensive automobile oil filters to prevent the need for a very costly engine overhaul - "pay me a little now or a whole lot later." It is now time to consider the benefits of early diagnosis of diabetes and of early detection of renal disease in known diabetics - *a new oil filter is a lot cheaper than a new engine.*

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# Fine-Needle Aspiration of Breast Masses

Roy J. Elfrink, MD, Jamie Ulbrich, MD and Michael H. Metzler, MD

**Evaluation of breast masses is a frequent dilemma encountered by a primary care physician. Adding fine-needle aspiration biopsy to the work-up of these lesions adds an inexpensive, highly accurate test with high patient acceptance. At our institution a technique using a butterfly needle has yielded a sensitivity of 91% and a specificity of 100%.**

Breast cancer is the most common form of cancer in females, and the rate is increasing. In the 1970's, the chance of a woman getting breast cancer was 1 in 13;[1] today it is 1 in 9.[2] Second only to lung cancer as a cause of cancer death,[3] breast cancer is the most common cause of death among women ages 40 to 45.[4]

Massive screening campaigns, such as the one recommended by the American Cancer Society,[5] have been instituted throughout the United States (Table 1). Most lesions are still found by patients themselves,[4] with the average size at time of detection being 2.5 centimeters. Metastases to regional lymph nodes are present in about fifty percent of patients at initial presentation.[1]

Fine-needle aspiration is a valuable adjunct in screening breast masses. It does not replace excisional biopsy; however, with good clinical judgment, it can be helpful in eliminating some of the cost and time involved in performing excisional biopsies.

## INDICATIONS

Fine-needle aspiration is especially applicable in separating cysts from solid tumors as well as in performing therapeutic drainage. If a cyst contains bloody or serosanguinous fluid, a biopsy is recommended.[6] If the cyst is completely aspirated, the patient is asked to return in 1 and 6 months to check for recurrence. Only a small number of these cysts (about 11%) will recur, and these should be re-aspirated or biopsied due to an increased risk of associated cancer.[6]

Aspiration cytology is also useful to specifically identify benign pathology in non-suspicious lesions (such as cysts, fibroadenomas, lipomas, and gynecomastia in men) and to reassure patients. It can be helpful in distinguishing breast cellulitis from inflammatory carcinoma, evaluating multiple nodules, and identifying malignant tumors prior to surgery so that patients can be presented with alternate forms of treatment. Fine-needle aspiration is also valuable in identifying fat necrosis, which can simulate cancer; and in identifying hematomas, which can be present as a solid mass, occurring after trauma. It can also be used to evaluate new masses in patients who have previously undergone definitive treatment. These new masses are often superficial and easily accessible.

**Table 1 - AMERICAN CANCER SOCIETY RECOMMENDATIONS (5)**

| | |
|---|---|
| All ages > 20 | Monthly breast self-exams |
| Age > 35 | Add annual breast exam |
| Age 40 | Add mammogram every 1-2 yrs |
| Age > 50 | Annual mammogram |

**Table 2 - POSITIVE PREDICTIVE VALUE (%) OF DETECTING BREAST CANCER (10-11)**

| | |
|---|---|
| Physical Exam | 63-70% |
| Mammography | 71-74% |
| Fine-Needle Aspirations | 92-97% |

## ADVANTAGES

The potential advantages of fine-needle aspiration are numerous. Patient acceptance of this procedure is high because there is minimal discomfort. There are no contraindications to this method, which yields a diagnosis in over 90% of masses aspirated.[7] It may be used to investigate lesions found in a pregnant or high risk patient. The time and equipment requirements are minimal, making it an excellent office or bedside procedure.

The diagnosis can be made rapidly. The procedure can be performed in two to three minutes. This often increases patient confidence and strongly enhances compliance with proposed therapy.

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This method also has a relatively low cost, being approximately 10 percent of the cost of a conventional biopsy.[8] It compares favorably with other forms of examination (Table 2). When compared to core-needle biopsy, it has been shown to be more accurate, less expensive, and easier to obtain, with less potential for complication.[9]

When combined with physical exam and mammography, sensitivity in many series is 95% to 100%.[10-13] Therefore, this method allows the clinician a complete examination at one patient encounter without delay or referral to a remote specialist, which can frustrate the patient and heighten anxiety.

## LIMITATIONS AND COMPLICATIONS

Technical ability can be a limiting factor with this procedure. The skill and experience of the operator performing the fine-needle aspiration, as well as the expertise of the cytopathologist performing the analysis, are of critical importance. One error that can be made by the operator is inadequate sampling. Accuracy can be improved by aspirating obvious, palpable masses using a fanning technique (Figure 1). The breast mass is often deeper than initially appreciated and occasionally requires a longer needle for an adequate sample. If the center of a necrotic lesion is sampled, an absent, insufficient, or unsatisfactory cellular content is acquired. It is important to discuss slide fixation preferences with your cytopathologist. Poorly prepared, fixed, or stained slides can also give unsatisfactory results.

False negatives occur and range from 2% to 18%.[14] This is most often attributable to: 1) geographical misses, 2) errors in technique, 3) non-recognition of malignant cells, and 4) characteristics of the tumor (i.e. scirrhous tumors and fibrotic tissue yield few cells). Therefore, negative results do not absolutely exclude cancer. If fine-needle aspiration is suspicious, an open biopsy is necessary.

A significant limitation is the fact that fine-needle aspiration is not well known to most practicing physicians. This might be corrected by including fine-needle aspiration technique in residency training.

Complications occur, but are rare and usually minor. These include hematomas, bleeding, infection, and pneumothorax. Hematomas and bleeding can be alleviated by firm pressure after the aspiration. Infections are rare and easily treated. Pneumothorax is an extremely rare complication occurring with penetration through the breast into the thorax. This has been reported only twice in more than 14,000 aspirations.[14] The potential of tumor seeding the needle track is theoretical and has been unverified in large series.

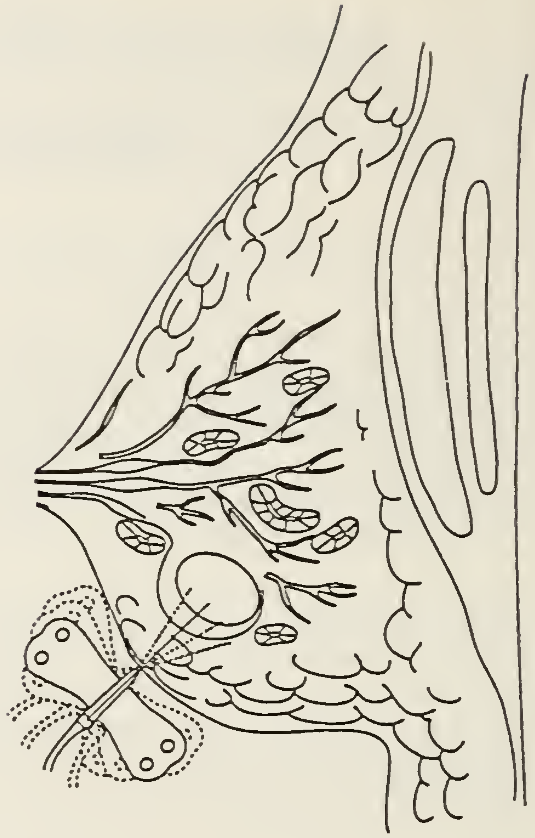

Figure 1 - Method of fanning technique.

## TECHNIQUE[15]

There are many different effective techniques. The following is one we have found to be easy to learn, inexpensive, and reliable. The equipment needed for fine-needle aspiration is minimal and inexpensive. It includes: 1) 30 cc plastic syringe with Luer-lock, 2) twenty-three gauge butterfly needle, 3) alcohol wipes, 4) local anesthetic, 5) two glass microscope slides, and 6) 95% ethyl alcohol (Figure 2).

After a complete history, breast exam, and explanation of the procedure to the patient, the following steps are recommended:

Place the patient in a comfortable position. Reaffirm the location of the mass and mark the area if necessary. Cleanse the skin with an alcohol wipe and inject local anesthetic intradermally. This may cause some distortion of landmarks but allows a more vigorous aspiration. Prior marking of the site can help alleviate this problem.

Next, introduce a twenty-three gauge butterfly into the mass. This is done by attaching the butterfly to a 35cc syringe. The needle is directed with the dominant

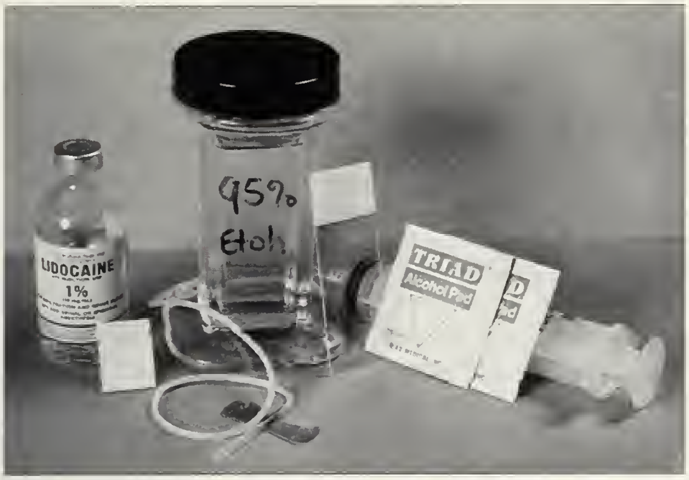

Figure 2 - Equipment needed for fine-needle aspiration.

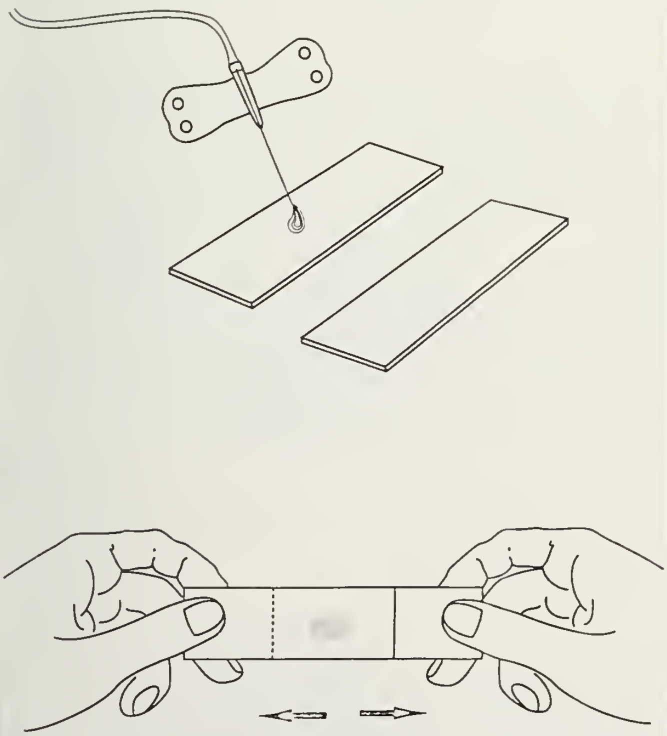

Figure 3 - Technique for making a smear.

hand, while the biopsy site is stabilized with the other hand. This allows extremely accurate needle placement and decreases the chances of sampling error. To prevent aspiration of epithelial cells, no negative pressure is exerted as the needle is introduced. The needle is directed centrally into small lesions and peripherally into large ones which may harbor necrotic centers.

Ten to 12 passes are made through the lesion under negative pressure. This is done in a fanning motion, ensuring a representative sample (Figure 1). An adequate sample is obtained when it is vigorously and competently collected. One should see a small amount of aspirated material in the butterfly tubing before removing the needle.

The manner in which the needle pierces the mass may be indicative of pathology. A cyst can be emptied in a single pass. Lipomas are entered easily. Fibrocystic disease and fibroadenomas have an ill-defined firmness. Malignancies often have a gritty resistance.

After the sample is obtained, negative pressure on the syringe is released and the needle withdrawn. Immediate pressure is applied to the aspiration site. The negative pressure on the syringe is released before withdrawing the needle so that the small amount of material remains in the butterfly needle and may then be used to make cytology slides.

The aspirated specimen is then vigorously ejected onto a waiting microscope slide and the droplet smeared with a second slide using a quick, horizontal motion (Figure 3). With experience, extraction of significant material can be identified on the unstained smear. The slides are then immediately placed in 95% alcohol.

A scant amount of sample remains in the syringe and needle. This is retrieved by aspirating a few milliliters of normal saline into the syringe through the butterfly. This sample is sent immediately to the cytopathologist, who can use centrifugation and membrane filter preparation to concentrate the scant specimen and provide an accurate examination. This provides a sample in addition to the slides.

Clear fluid aspirated from a cyst may be sent for cytology, but this has an extremely low yield--zero malignancies in 395 aspirations.[6] If the fluid is bloody or turbid, the yield is higher--two malignancies in three patients with bloody aspirate and a residual mass.[6] If a mass remains after aspirating a cyst, it should be sampled. All aspirated cysts should be reexamined in one month. Recurrent cysts should be re-aspirated or biopsied.[6]

A carefully performed aspiration will minimize the chance of obtaining an inaccurate or non-representative sample. Aspiration and smearing of samples are truly an art. Attention to detail is of utmost importance. Because of a significant learning curve, mastering these techniques results in increased sensitivity and specificity.

## INTERPRETATION

According to Kline,[16] cytopathologists base their interpretation mostly on six important criteria: 1) cellularity, 2) dyshesion, 3) monomorphism, 4) nuclear membrane irregularity, 5) anisonucleosis, and 6) eosinophilic macronucleoli.

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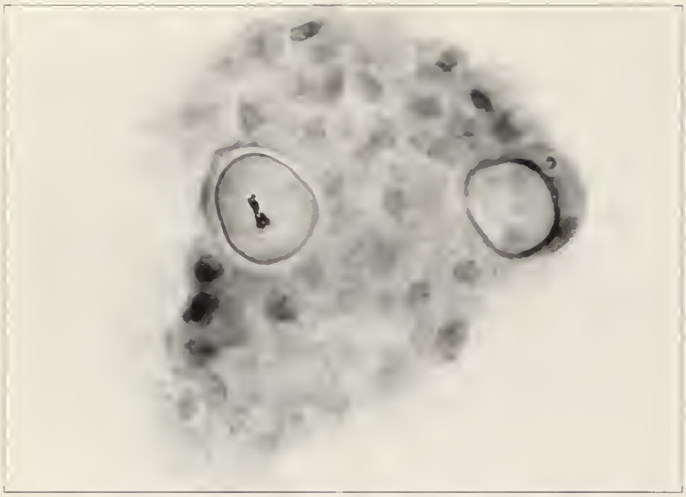

Figure 4 - Negative for malignancy: fibrocystic disease: 400X. Note the tight cluster with cellular cohesion and uniform nuclear size all suggestive of benign disease.

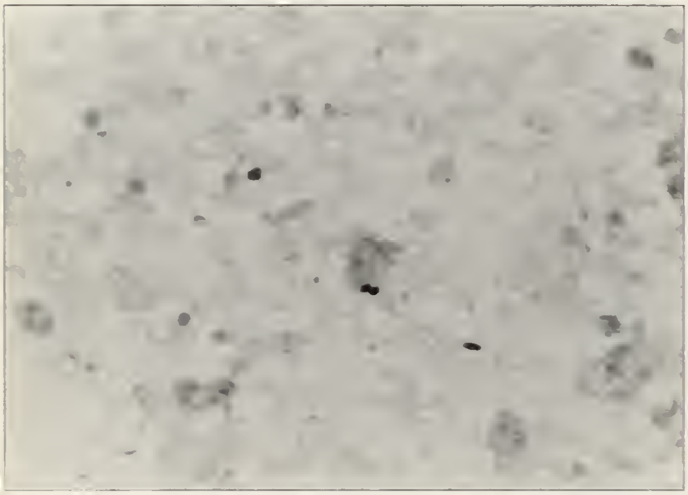

Figure 5 - Positive for malignancy: poorly differentiated adenocarcinoma: 100X. Note the lack of cellular cohesion, anisonucleosis and necrotic debris all suggestive of malignancy.

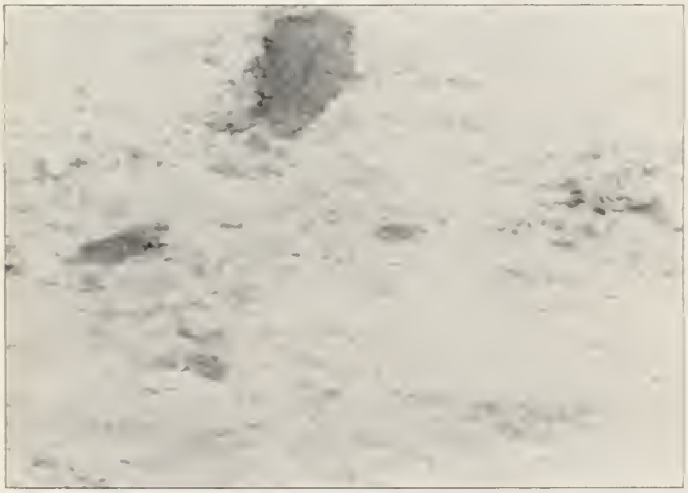

Figure 6 - Positive for malignancy: mucinous carcinoma: 40X. Note hypercellularity, dyhesion and streams of mucous suggestive of malignancy.

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In general, aspirates from benign lesions are "cell poor." The cells that are present show good cellular cohesion with well-organized cellular sheets and distinct cell borders (Figure 4). Polymorphism (multiple forms) is common and nuclear membranes are regular. Anisonucleosis (unequal nuclear size) and macronucleoli are rare.

Malignant lesions, on the other hand, have large numbers of cells, with single, abnormal cells seen in most cases (Figures 5 and 6). Monomorphism (one cell form), with aggregates of cells and indistinct cell borders, is present. Nuclear overlapping, crowding, and irregular membranes are noted. Irregular nuclear shapes and eosinophilic macronucleoli are usually confined to malignant lesions.

Slide background can also be important in interpreting aspirates (Figures 5 and 6). Scattered red blood cells are a result of the sampling procedure. However, necrotic debris is suggestive of malignancy. Pools of mucin can be noted with mucinous carcinoma.

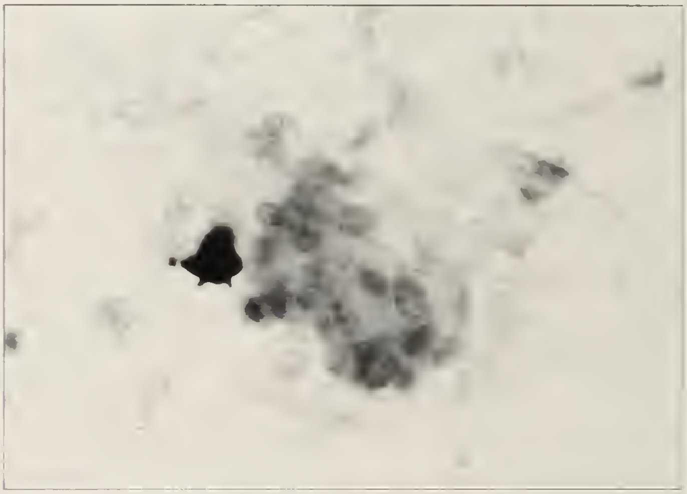

Figure 7 - Suspicious: 400X. Note cellular cohesion along with nuclear atypia.

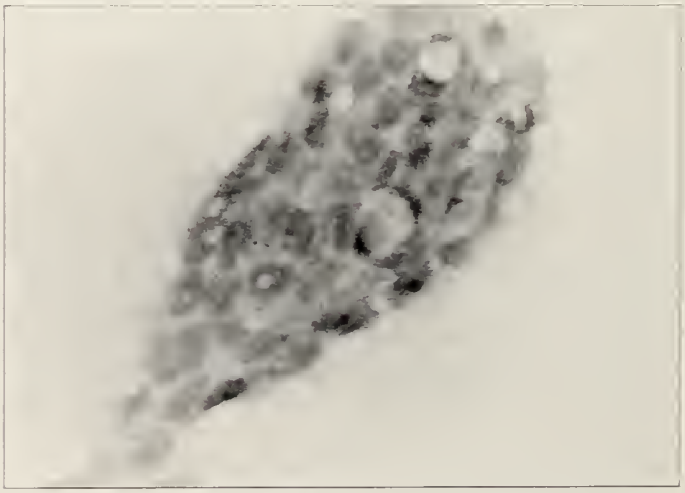

Figure 8 - Unsatisfactory: 400X. The lack of detail in these poorly preserved cells is secondary to air drying.

There is no single universal feature or cell pattern that differentiates benign from malignant lesions. Rather, physical exam and mammogram, combined with fine-needle aspiration, lead to an accurate diagnosis.

## REPORTING

Fine-needle aspirates are reported as 1) negative for malignancy; 2) positive for malignancy; 3) suspicious; or 4) unsatisfactory.

"Negative for malignancy" aspirates (Figure 4) exclude malignancy only if they are representative of the mass sampled. Lesions with this diagnosis require follow-up; if there is any suspicion of cancer, an open biopsy is indicated.

A report of "positive for malignancy" (Figures 5 and 6) indicates that the cytopathologist is certain that there is malignancy present in the sample. This allows the surgeon to proceed with definitive treatment.

A "suspicious" reading (Figure 7) requires follow-up with repeat fine-needle aspiration or excisional biopsy. This results from insufficient criteria for malignancy, lack of adequate numbers or preservation of abnormal cells, and abnormal cells that cannot be categorized.

"Unsatisfactory" or "acellular" smears (Figure 8) necessitate repeat fine-needle aspiration or excisional biopsy, because no diagnosis can be made. This may be due to insufficient numbers of cells for interpretation, poorly preserved cells, or epithelial cells obscured by inflammation or debris.

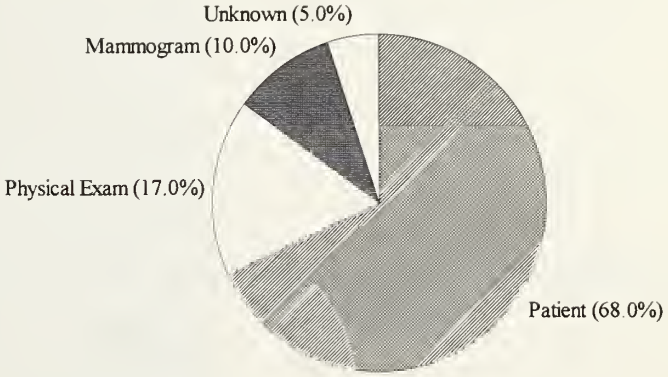

**Figure 9 - Initial detection of breast masses.**

**Table 3 - RESULTS OF FINE-NEEDLE ASPIRATION OF BREAST MASSES**

| Cytology | All |  | Follow-up Histology |  |
|---|---|---|---|---|
|  | No. | (%) | Pos. | Neg. |
| Negative | 186 | (70) | 1 | 17 |
| Positive | 14 | (5) | 10 | 0 |
| Suspicious | 25 | (9) | 6 | 18 |
| Unsatisfactory | 39 | (15) | 3 | 7 |
| All | 264 |  | 20 | 42 |

## ACCURACY

Accuracy of fine-needle aspiration improves with increasing experience. In studies of over 1,500 cases, sensitivity (defined as $\frac{TruePositive}{TruePositive + FalseNegative}\ x\ 100$) ranges from 90% to 98%.[16-21]

The two most important factors involved in the accuracy of fine-needle aspiration are the experience of the person performing the fine-needle aspiration and the experience of the person interpreting the fine-needle aspiration.

False negative diagnoses occur due to sampling error or failure to recognize the malignant nature of the aspirate. Sampling error may be related to tumor size, with smaller lesions being more difficult to aspirate. The depth of the lesion is another important factor, with deeper lesions being more difficult to accurately sample. The degree of fibrosis also leads to errors due to the aspirate containing too few cells.

False positive diagnoses are the result of inexperience of the physician interpreting the smears. This occurred more frequently in the past and resulted in criticism of the technique. Advances in evaluation of fine-needle aspiration cytology have now made this a rarity. There is definitely no room for error, because a mistake may lead to an unnecessary mastectomy. In certain centers in the United States, mastectomies are performed on fine-needle aspiration results.[16] This treatment is not experimental and has been performed in some European centers for over a decade.

Accuracy can be further improved by combining fine-needle aspiration with physical exam and mammography. Several studies show sensitivities of 95% to 100% when a combination of physical exam, mammography and aspiration cytology is used.[10-13]

## OUR DATA

A 10-year chart review was performed at our institution to review the accuracy of fine-needle aspiration. A total of 264 patient charts (from January 1980 to December 1990) were reviewed. There were 263 females and one male. Masses were initially detected by the patient in most cases (see Figure 9). Ages ranged from 15 to 87 years old. Fine-needle aspirations were performed by attendings and residents in general surgery and pathology. The results are shown in Table 3.

Continued on page 298

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Follow-up included physical exam, mammography, biopsy or mastectomy. Of those followed up with histology there were no false positives and one false negative. The false negative lesion was initially detected on mammogram and was not obviously palpable. Follow-up on those lesions not excised has revealed no documented cancer occurrence with follow-ups of 1 month to 13 years, (mean 20 months). Examination of this data reveals that 6 of 24 suspicious aspirations and 3 of 10 unsatisfactory aspirations were histologically diagnosed as cancer. When including only lesions with a cytological diagnosis of negative or positive the sensitivity and specificity of fine-needle aspirations of breast masses at our institution are 91% and 100% respectively. This compares favorably to most published studies.[16-21]

## DISCUSSION

Breast disease provides the physician with an opportunity to examine and solve a clinical problem. Instant referral to a surgeon is not always necessary. The investigation begins with a careful history and physical exam. Next, a mammogram can be considered. At this point, the physician may decide to perform a fine-needle aspiration, or to refer the patient for an aspiration or open biopsy.

Fine-needle aspiration of the breast allows the clinician a more complete examination at one patient encounter. To fully utilize fine-needle aspiration one must: 1) obtain a good history and physical; 2) be dedicated in developing sound aspiration technique and giving good quality representative smears; 3) work closely with a cytopathologist; 4) understand the limitations of the procedure; 5) include clinical assessment, mammography and fine-needle aspiration to increase accuracy; and 6) refer for excision all suspicious lesions despite negative fine-needle aspiration and mammography.

Fine-needle aspiration is a highly accurate, safe, inexpensive, and rapid procedure which allows differentiation of benign from malignant tumors. With dedication and diligence, fine-needle aspiration is a valuable tool which can be easily learned and mastered by the clinician.

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## The Authors

**Dr. Elfrink** is in private practice at Marshall Surgical Associates, Marshall, Missouri. He is also a clinical instructor in the Department of Surgery an the University of Missouri-Columbia. **Dr. Ulbrich** is a resident in the Department of Family Practice at John Peter Smith Hospital, Fort Worth, Texas. **Dr. Metzler** is chief of the Division of General Surgery at the University of Missouri-Columbia.

**Reprint requests to:**
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# JUST ASK

Peter Molberg, MD
*Springfield, Missouri*

"Why don't they ask me?" she wondered. "Why do they just ASSUME?"

Seventy-eight years of doing OK. Three children. Widowhood. Raising babies, caring for a sick husband, putting in a garden every year. Housework, handwork, footwork. Most of it, fifty-eight years of it, with this spastic, contracted arm and crippled leg.

Ever since that Autumn day in 1935 when she stood up too soon in front of her 18-year-old brother and his target rifle. They had to pick pieces of hair and bone out of her brain. They were surprised she lived. But she did, and she succeeded in putting together a good life. Her kids were successful, her home tidy. It was only last month, after the third fall in two months and some mild confusion and the final acceptance that she could no longer manage alone that she chose the nursing home over going to live with her daughter.

The young attendant and his harried supervisor just rolled their eyes when asked to remove the bedpan so the doctor could better examine her abdomen. "You can see she's had a stroke," they groaned together. "She's asked for that bedpan three times already and hasn't used it once. She's too senile to know what she wants."

The doctor was surprised by the clarity of her answers. "Yes," she complained, "I can't get them to let me up to the bathroom. I can't function lying down. Never could. Don't think I ever will. I think that's why my belly hurts. They won't get me up at the nursing home either. And if I get up by myself they scold me and hustle me back into bed."

They resisted the order to get her up. It's too risky to lift a stroke patient; it might cause back injury. Let them do it on the ward or when she gets back to the nursing home.

But it worked. She was assisted to the bathroom, and her pain resolved.

"Why didn't they just ask? Why do they all seem so busy and so sure of themselves?" she wondered, as they moved her into the van for the ride back to the home.

She seemed to be just a confused old lady complaining of pain and senile from a stroke. But she was more.

Maybe they'll see it differently when their turn comes and some stranger in white slides something under them and says "There, go." Hopefully, someone will take the time to ask.

# PHYSICIAN RECOGNITION AWARDS

**The Physician Recognition Award is presented by the Missouri State Medical Association and the American Medical Association to physicians who voluntarily complete 150 hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.**

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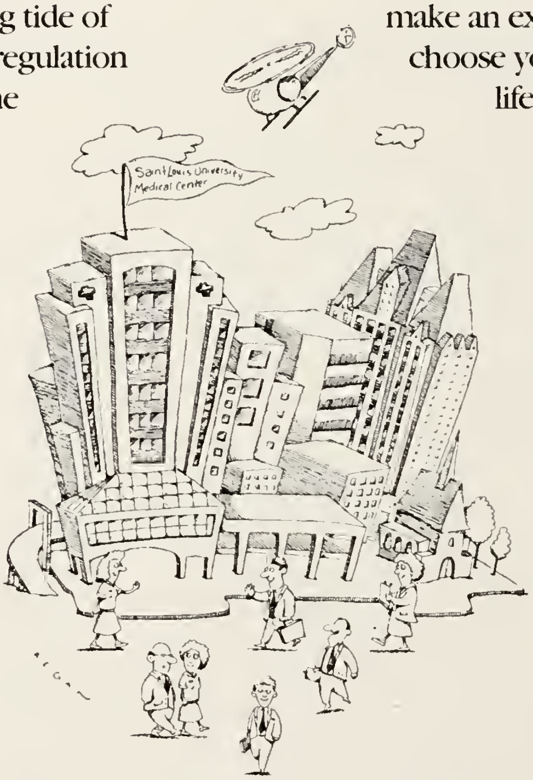
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❖ **Hussein Y. Abukhudair, MD,** One Children's Place, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Abukhudair received his medical degree at Faculty of Medicine Jordan University, Amman, Jordan, in 1980. He completed his residency at Illinois Masonic Medical Center, Chicago. Dr. Abukhudair specializes in pediatric anesthesia.

❖ **John H. Baker, MD,** 800 N. Lindbergh Blvd., A25B, St. Louis, MO 63167, has become a member of the Missouri State Medical Association. Dr. Baker received his medical degree at Georgetown University, Washington DC, in 1956. He completed his residency at Naval Medical Center, San Diego. Dr. Baker specializes in occupational medicine.

❖ **Charles H. Barnes, MD,** Suite 5000, 4321 Washington, Kansas City, MO 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Barnes received his medical degree at the University of Iowa in 1988. He completed his residency at the University of Nebraska. Dr. Barnes specializes in ophthalmology.

❖ **Rajeeva K. Bashyakarla, MD,** 1703 W. 30th St., Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Bashyakarla received his medical degree at Gandhi Medical College, Omania University, Hyderabad, Andhra Pradesh, India, in 1978. He completed his residency at New York Medical College. Dr. Bashyakarla specializes in anesthesiology.

❖ **David B. Clifford, MD,** 660 S. Euclid Ave., Box 8111, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Clifford received his medical degree at Washington University in 1975. He completed his residency at Barnes Hospital. Dr. Clifford specializes in neurology.

❖ **David D. Cravens, MD,** Centralia Clinic, 123 N. Collier, Centralia, MO 65240, has become a member of the Boone County Medical Society. Dr. Cravens received his medical degree at the University of Missouri-Columbia in 1978. He completed his residency at the University of Missouri-Columbia. Dr. Cravens specializes in family practice.

❖ **Richard P. Dellinger, MD,** One Hospital Dr., MA419, Columbia, MO 65212, has become a member of the Boone County Medical Society. Dr. Dellinger received his medical degree at the Medical University of South Carolina in 1975. He completed his residency Wilford Hall USAF Medical Center. Dr. Dellinger specializes in internal medicine.

❖ **John T. Engels, MD,** 3009 N. Ballas Rd., 131, St. Louis, MO 63131, has become a member of the Missouri State Medical Association. Dr. Engels received his medical degree at Rush Medical College, Chicago, in 1984. He completed his residency at Barnes Hospital. Dr. Engels specializes in diagnostic radiology.

❖ **Dale M. Fletcher, MD,** 3009 N. Ballas Rd., Suite 131, St. Louis, MO 63131, has become a member of the Missouri State Medical Association. Dr. Fletcher received his medical degree at the University of Pittsburgh in 1986. He completed his residency at the Mallinckrodt Institute of Radiology. Dr. Fletcher specializes in diagnostic radiology.

❖ **James W. Gigantelli, MD,** One Hospital Drive, Dept. of OPH, Columbia, MO 65212, has become a member of the Boone County Medical Society. Dr. Gigantelli received his medical degree at Vanderbilt University in 1985. He completed his residency at Baylor College. Dr. Gigantelli specializes in ophthalmology.

❖ **Anisa Hassan, MD,** 3201 McClelland Blvd., Joplin, MO 64803, has become a member of the Jasper County Medical Society. Dr. Hassan received her medical degree at Dow Medical College, Karachi, Pakistan, in 1976. She completed her residency and fellowship at Roswell Park Cancer Institute & Suny Buffalo Program, Buffalo, NY. Dr. Hassan specializes in oncology and hematology.

❖ **Kimberly Jamison, MD,** Nephrology Hypertension Association, 1701 E. Broadway, Columbia, MO 65201, has become a member of the Boone County Medical Society. Dr. Jamison received her medical degree at the University of Missouri-Columbia in 1982. She completed her residency and fellowship at the University of Missouri-Columbia. Dr. Jamison specializes in internal medicine.

❖ **Manuel C. Jose, MD,** Humana Health Care Plans, 4700 Belleview, Kansas City, MO 64112, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Jose received his medical degree at the University of Hawaii John A. Burns

Continued on page 304

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School of Medicine, Honolulu, Hawaii, in 1981. He completed his residency at Kalamazoo Center for Medical Studies. Dr. Jose specializes in internal medicine.

❖ **Michele D. Koo, MD,** 450 N. New Ballas, Suite 250, St. Louis, MO 63141, has become a member of the Missouri State Medical Association. Dr. Koo received her medical degree at Washington University in 1986. She completed her residency at the University of Kansas. Dr. Koo specializes in plastic surgery.

❖ **Mary Kussman, MD,** 3292 Bristol Hall, Bridgeton, MO 63044, has become a member of the Missouri State Medical Association. Dr. Kussman received her medical degree at the University of Missouri-Kansas City in 1987. She completed her residency at Barnes Hospital. Dr. Kussman specializes in anesthesiology.

❖ **Diane L. Light, DO,** Doerhoff Surgical Service PC, 1015 Madison, Jefferson City, MO 65101, has become a member of the Cole County Medical Society. Dr. Light received her doctor of osteopathy at Kirksville College of Osteopathic Medicine in 1987. She completed her residency at Lansing General Hospital. Dr. Light specializes in general surgery.

❖ **Blake A. Little, MD,** 2700 McClelland, Joplin, MO 64804, has become a member of the Jasper County Medical Society. Dr. Little received his medical degree at the University of Missouri-Kansas City in 1986. He completed his residency and fellowship at St. Louis University. Dr. Little specializes in internal medicine.

❖ **Wesley G. Mathews, DO,** 3933 S. Broadway, St. Louis, MO 63118, has become a member of the Missouri State Medical Association. Dr. Mathews received his doctor of osteopathy at Kirksville College of Osteopathic Medicine in 1987. He completed his residency at Kirksville College of Osteopathic Medicine. Dr. Mathews specializes in internal medicine.

❖ **Victoria W. Muehlebach, MD,** St. Luke's Hospital, 44th & Wornall Rd., Kansas City, MO 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Muehlebach received her medical degree at St. Louis University in 1989. She completed her residency at St. Luke's Hospital. Dr. Muehlebach specializes in anesthesiology.

❖ **Marcus A. Neubauer, MD,** 12809 Bluejacket St., Overland Park, KS 66213, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Neubauer received his medical degree at the University of Kansas in 1988. He completed his residency at the University of Kansas and fellowship at the University of Washington. Dr. Neubauer specializes in hematology.

❖ **Mary C. O'Connor, MD,** Trinity Lutheran Hospital, 3030 Baltimore, Kansas City, MO 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. O'Connor received her medical degree at the Medical College of Wisconsin, Milwaukee, WI, in 1985. She completed her residency at the Medical College of Wisconsin and fellowship at the University of Kansas. Dr. O'Connor specializes in infectious diseases.

❖ **John L. Ritter, MD,** 11749 Summerwood Dr., St. Louis, MO 63146, has become a member of the Missouri State Medical Association. Dr. Ritter received his medical degree at the University of Missouri-Kansas City in 1987. He completed his residency at Creighton University and fellowship at Cardinal Glennon Children's Hospital. Dr. Ritter specializes in diagnostic radiology.

❖ **Michelle R. Rumpf, MD,** 11201 Colorado, Kansas City, MO 64137, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Rumpf received her medical degree at the University of Missouri-Kansas City in 1990. She completed her residency at Baptist Medical Center, Kansas City. Dr. Rumpf specializes in family practice.

❖ **S. Jon Rupright, DO,** 1 Hospital Drive, Columbia, MO 65212, has become a member of the Cole County Medical Society. Dr. Rupright received his doctor of osteopathy at the Kirksville College of Osteopathic Medicine in 1972. He completed his residency at Southfield Rehabilitation Hospital. Dr. Rupright specializes in physical medicine and rehabilitation.

❖ **Walter L. Stewart, MD,** Ellis Fischel Hospital, 70 Business Loop, Columbia, MO 65203, has become a member of the Boone County Medical Society. Dr. Stewart received his medical degree at the University of New Mexico in 1986. He completed his residency at the University of Missouri-Columbia. Dr. Stewart specializes in anesthesiology.

❖ **Sudhir Sundaresan, MD,** One Barnes Hospital Plaza, Suite 3107 QT, St. Louis, MO 63110, has become a member of the Missouri State Medical Association. Dr. Sundaresan received his medical degree at the University of Ottawa, Ontario, Canada, in 1983. He completed his residency at Barnes Hospital. Dr. Sundaresan specializes in general surgery.

❖ **Scott W. Tanner, DO,** 1015 Madison, Jefferson City, MO 65101, has become a member of the Cole County Medical Society. Dr. Tanner received his doctor of osteopathy at Kirksville College of Osteopathic Medicine in 1988. He completed his residency at the University of Missouri-Columbia. Dr. Tanner specializes in anesthesiology.

❖ **F. Parker Thornton III, MD,** Suite 300, 4320 Wornall Rd., Kansas City, MO 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Thornton received his medical degree at the University of Kansas in 1988. He completed his residency at the University of Kansas. Dr. Thornton specializes in otolaryngology.

❖ **Donald R. Unwin, MD,** 12818 Tesson Ferry, St. Louis, MO 63128, has become a member of the St. Louis Metropolitan Medical Society. Dr. Unwin received his medical degree at St. Louis University in 1984. He completed his residency at Bethesda Eye Institute. Dr. Unwin specializes in ophthalmology.

❖ **Kelvin L. Walls, MD,** 4801 Cliff Avenue, Suite 204, Independence, MO 64055, has become a member of the Missouri State Medical Association. Dr. Walls received his medical degree at the University of Missouri-Columbia in 1987. He completed his residency at the University of Kansas. Dr. Walls specializes in otolaryngology.

❖ **Don R. Whitener, MD,** 401 Keene St., Columbia, MO 65201, has become a member of the Boone County Medical Society. Dr. Whitener received his medical degree at the University of Missouri-Columbia in 1969. He completed his residency at Parkland Memorial Hospital, Dallas, and fellowship at the University of Texas Southwestern Medical School. Dr. Whitener specializes in internal medicine.

❖ **Brian M. Wicklund, MD,** 2401 Gillham Rd., Kansas City, MO 64108, has become a member of the Missouri State Medical Association. Dr. Wicklund received his medical degree at McGill University, Faculty of Medicine, Montreal, Quebec, Canada, in 1982. He completed his residency and fellowship at the University of Iowa Hospitals and Clinics. Dr. Wicklund specializes in pediatric hematology-oncology.

❖ **Stephen B. Wiles, MD,** 5400 N. Oak, Suite 202, Kansas City, MO 64118, has become a member of the Clay-Platte County Medical Society. Dr. Wiles received his medical degree at the University of Missouri-Kansas City in 1987. He completed his residency at the University of Missouri-Columbia. Dr. Wiles specializes in ophthalmology.

❖ **Charles L. Yates, MD,** P.O. Box 975, Columbia, MO 65201, has become a member of the Boone County Medical Society. Dr. Yates received his medical degree at the University of Kentucky in 1977. He completed his residency at the University of Missouri-Columbia. Dr. Yates specializes in anesthesiology.

## RESIDENTS

Dawn E. Adams, MD - *Internal Medicine*
Ginene M. Rogler-Brown, *MD - Anesthesiology*
Richard T. Falter Jr, MD - *Diagnostic Radiology*
Randall S. Fortuna, MD - *General Surgery*
David A. Gaston, MD - *Dermatology*
Linda L. Gratney, MD - *Neonatology*
Patrick Sandiford, MD - *Pulmonary Diseases*
Laurie D. Senol, MD - *Internal Medicine*
Belinda Sun, MD - *Diagnostic Radiology*
Ronda L. Warren, MD - *Family Practice*

## STUDENTS

*Washington University* - Amy Weed

# CME CALENDAR

**The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send CME information for listing in *MISSOURI MEDICINE*. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.**

## June

**2 & 3 - *St. Louis:* Advanced Applications in Endoscopic Neurosurgery.** 14 credit hours. Contact St. Louis University, CME, 314/577-8167 or 800/553-2712.

**3 - *Springfield*: 4th Annual Decisions in Trauma: From Impact to Recovery.** 6 credit hrs. Call Julie Hartley, 417/885-6111.

**3 & 4 - *St. Louis*: Neurosurgery Workshop Part I: Advanced Applications in Endoscopic Neurosurgery.** 14 credit hours. Contact St. Louis University, 314/577-8167 or 800/553-2712.

**4 - *St. Louis*: Thrombolytic Therapy.** 4 credit hours. Contact St. Louis University, CME, 314/577-8167 or 800/553-2712.

**4 - *Fulton*: Cardio-Pulmonary Review.** 4 credit hours. Contact Laurie Seigel, University of Missouri, 314/882-4105.

**6 to 8 - *St. Louis*: Neurosurgery Workshop, Part II: Peripheral Nerve.** 22 credit hours. Contact St. Louis University, CME, 314/577-8167 or 800/553-2712.

**8 - *St. Louis*: Drug Therapy of Alzheimer's Disease.** Contact Washington University 314/362-6893, 800/325-9862 interstate.

**8 - *St. Louis*: Pediatric Preoperative Evaluation.** 1 credit hour. Contact Cardinal Glennon, Bob Jaeger, 314/772-8300.

**9 to 11 - *St. Louis*: Neurosurgery Workshop, Part III: Spine - Microsurgery and Stabilization.** 24 credit hours. Contact St. Louis University, CME, 314/577-8167 or 800/553-2712.

**10 - *Springfield:* Pediatric Advanced Life Support Renewal Course.** 8 credit hours. Call Linda Climer, 417/885-2648.

**10 - *Boston, MA*: Frontiers in Ovulation Induction.** Contact Washington University 314/362-6893, 800/325-9862 interstate.

**10 - *Springfield:* Pediatric Advanced Life Support Recertification.** 7 credit hours. Call 417/885-4117.

**10 & 11 - *Columbia*: 16th Annual Pediatrics Program: Common Childhood Problems.** 12.2 credit hours. Contact Laurie Seigel, University of Missouri, 314/882-4105.

**10 & 11 - *Chesterfield*: C.I.S.H. (Classical Intrafascial SEMM [Serrated Edge Morcellator] Hysterectomy).** 10 credit hours. Contact Carol Broemmer, CME Coordinator, 314/542-4759.

**11 - *St. Louis*: Treating Neuromuscular Disease.** 5 credit hours. Contact St. Louis University, 314/577-8167 or 800/553-2712.

**11 & 12 - *Chesterfield*: Sports Medicine for the Family Physician - Ankle and Foot.** 13.25 credit hours. Contact Elaine Simons, 314/275-8850.

**11 to 15 - *Arlington, VA*: Board Review in Family Medicine.** Contact Daniel E. Reichard, GW University, 202/994-4285.

**13 to 18 - *St. Louis*: Neurosurgery Workshop, Part IV: Microsurgery of the Brain.** 36 credit hours. Contact St. Louis University, CME, 314/577-8167 or 800/553-2712.

**15 - *Poplar Bluff*: The Controversy of Group B Strep.** 1 credit hour. Contact Cardinal Glennon, Bob Jaeger, 314/772-8300.

**16 to 19 - *Tan-Tar-A, Osage Beach*: MAFP 46th Annual Meeting.** Over 20 possible CME hours. Contact MAFP, 8301 State Line Rd., Suite 102, Kansas City, MO 64114.

**17 to 19 - *Lodge of the Four Seasons, Lake Ozark*: Annual Professional Meeting of the Missouri Chapter of American College of Surgeons.** Contact Linda Wheelen, 417/869-5222.

**21 to 25 - *New York, NY*: 16th National Lesbian and Gay Health Conference and 12th Annual AIDS/HIV Forum.** Contact Daniel E. Reichard, GW University, 202/994-4285.

**23 to 25 - *St. Louis*: Pediatric Advanced Cardiac and Trauma Support for Life/Pediatric Advanced Life Support Provider Course.** 20 credit hrs. Call Mary Beth Foerstel, 314/577-5385.

**23 to 25 - *St. Louis*: Abusable Medications and Clinical Challenges: Prescribing Psychotropic Drugs for Difficult Patients in Primary Care.** Washington University 314/362-6893 in Missouri, 800/325-9862 interstate.

**24 & 25 - *Kansas City*: Depression Throughout the Lifespan: Psychopharmacologic & Psychotherapeutic Strategies featuring Drs. Steven Dubovsky, Taylor Segraves, George Zubenko & Walter Menninger.** 12 credit hours. Contact the Menninger Continuing Education, 800/288-7377.

**24 to 26 - *St. Louis*: Frontiers in Endourology.** Contact Washington University, 314/362-6893, or 800/325-9862 interstate.

**25 - *St. Louis*: Substance Abuse.** Contact CME, Washington University, 314/362-6893 in MO or 800/325-9862 interstate.

**25 - *Springfield*: Advanced Cardiac Life Support Renewal Course.** 8 credit hours. Call Linda Climer, 417/885-2648.

## July

**7 - Maryville, IL: Gastroesophageal Reflux: Pediatric Perspectives.** 1 credit hour. Contact Cardinal Glennon, Bob Jaeger, 314/772-8300.

**8 & 9 - *St. Louis*: Advanced Trauma Life Support Provider Course.** 16 credit hours. Contact Joyce Hope, 314/577-8802.

**8 to 10 - *Springfield*: Advanced Cardiac Life Support Provider Course.** 18 credit hours. Call Julie Hartley, 417/885-6111.

**9 - *St. Louis*: Advanced Trauma Life Support Provider Refresher Course.** 8 credit hrs. Call Joyce Hope, 314/577-8802.

**15 - *San Francisco, CA*: Frontiers in Ovulation Induction.** Contact Washington University 314/362-6893 in Missouri, 800/325-9862 interstate, fax 314/362-1087.

**15 - *Springfield*: Breast Cancer Symposium Early Diagnosis and Treatment.** 5.75 credit hrs. Call Donna Gloe, 417/885-2770.

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1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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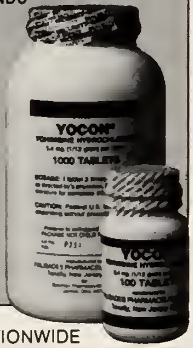

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Journal of the Missouri State Medical Association July 1994

*In this Issue:*

- 136th MSMA Annual Meeting *Minutes, Resolutions, Committee & Commission Reports, Registration and Photographs*
- Transpetrosal Approach to Meningiomas of the Medial Temporal Bone
- Physician Leadership: Directing Community Health Care
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The subscription price per year for non-members is $20.00. Annual subscription for members is included in the annual membership dues. The international subscription price is $40.00. Single copies are $4.00 and the cost os a copy of the annual August Directory is $15.00.

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# H. Jerry Murrell, MD, MSMA President

H. Jerry Murrell, MD receives the gavel from Immediate Past President Melvin C. Kasten, MD.

*"I'm from the government, and I'm here to help you!"*

How many doctors lounge stories begin or end with that phrase? Too many to count...but the humor is stale. Reality is cold, and **it's here!** Both nationally and within Missouri, forces are at work to change dramatically the system in which we currently practice.

Clearly, there are things wrong with the current system - the problem of the uninsured and the underinsured, the lack of an adequate primary care delivery system, the need for insurance industry reforms, the need for anti-trust legislation and especially for tort reform legislation...the list goes on and on.

Clearly, the fact that we as a nation spend one trillion dollars per year for health care - and that we do so with a system which apparently pleases no one - is an international puzzle and joke. American health care is as costly as the entire GNP of Great Britain, but our society, with its absurd lifestyles and dangerous cultural habits, has an inefficient delivery system which leaves many citizens with inadequate care.

On the other hand, the schemes devised to remedy these wrongs seem so very wrong in themselves as to make the reasonable, prudent person blink in disbelief. Centralized planning and regional implementation smack of socialism at least.

Have legions of bureaucrats learned nothing from the history lessons of 20th century Europe and the eastern block? Our efforts at federal social engineering - most recently applied by the government interaction with the savings and loan industry - are too often mismanaged and poorly executed.

Mr. Clinton's plan, as characterized by the Congressional Budget Office, is a scheme to federalize our entire private insurance program. Vast new entitlements are to be created to expand greatly the benefit package available to citizens. Mr. Clinton's plan will dwarf Medicare and will rise to be 20% larger than Social Security. Its principal vehicle is "managed competition."

Managing health care is not a new concept; it has been growing for a few decades. Initially, companies with a substantial number of workers enrolled in a plan, came to hospitals and asked, "Can you take care of these patients? By the way, we would like a discount." They asked the same of physicians. The plan was barely successful.

So industry became more strident and demanding. Then the offer moved from, "We have the patients...would you like to contract with us...we'd like to pay you less," to "We want to offer you an exclusive contract, but we will require a bigger discount."

The health industry responded with HMO's and other similarly initialed systems which are built upon the keystone of primary care. Managing the care became the hallmark of depersonalized corporate medicine.

Fee schedules - such as RBRVS (Really Bad Revenue Very Soon) appeared. Now employers are beginning to contract directly with integrated systems and to cut out the middle man in some cases. ERISA complicates the whole process (ERISA is Easy Retirement Income System For Attorneys).

Once hospitals had but one commodity: acute care beds; and physicians needed hospitals. But now the game is not so simple; the shift from income derived from providing care to income for agreeing to provide care is confusing. Instead of receiving a fee for piecework, e.g. an appendectomy, one receives payment for

Continued on page 320

Immediate Past President Melvin Kasten, MD, gives MSMA President H. Jerry Murrell, MD, supplies to help him with his year of leadership. The racket represents Dr. Murrell's tennis enthusiasm.

Continued on page 319

agreeing to do appendectomies, whether he or she performs few or many.

Furthermore, externalizing the gatekeeping decisions has pulled away from those treating patients toward those paying the premiums: control of patient populations shifts from physician to whomever is paying. Hospitals and physicians have formed and are forming "joint ventures" in an attempt to ensure that their interests run parallel. But along with joint ventures come questions and data collection such as "what is your average length of stay?" and "Why are you ordering that test?"

Suddenly physician profiles and data collection are bywords and it is harsh reality that **data is power**. Soon electronic hook ups will link virtually all hospitals and physicians into a gigantic network which will enable someone to profile, categorize, pigeonhole, and make personnel decisions for their network regarding who gives which care where and when. How do we fit into this evolution?

We must be part of the governance of the networks. By assuming risk sharing relationships with partners we can continue to have a managerial role in this ever more complex system. Unless we are willing to share in the expenses of start up costs - and to share as well in the ultimate profits or losses - then we will be relegated to subservient technologist roles rather than being decision making partners in health care systems.

We must continue to push hospitals and insurance companies and integrated networks into recognizing the benefits of physician partnering in decision making. We must monitor legislation carefully and remain ever vigilant in order to preserve our role as partners. We must speak with one voice - strong, clear, decisive.

Petty internecine quarrels must be set aside and we must join together in advocacy for our patients. Organized medicine remains our strongest voice - both in Washington and in Jefferson City. Encourage your colleagues who are not members to join us and to join NOW.

Collegiality is not easy. Physicians are individualistic. We are not group animals; we crave order but despise authority. And yet the really successful systems in this country - Mayo, Kaiser, Geisinger, Marshfield - are all physician-driven and partnered.

Group practices and joint efforts may represent the last hope of controlling our destinies. Physician directed organizations may give us the avenue of unity which may be our salvation.

Stay tuned; stay active; stay alert. The next several months will be seminal in medicine, and we must work hand in hand to preserve the good aspects of our system while helping to shape the changes. ■

Peggy Matthews, MSMA Past President John Matthews, MD, MSMA Alliance President Jean Wankum, MSMA Councilor Robert Wankum, MD, Alliance Past President Eileen Dyer and MSMA Past President Gary Dyer, MD, enjoy the Inauguration.

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# The Storm Will Pass

Jean Wankum, MSMA Alliance President

AMA Alliance President Mary Hanson inaugurates MSMA Alliance President Jean Wankum and President-elect Nona Chapman.

Imagine the sun is shining brightly as you head into the woods on this lovely spring day. The new leaves have come forth on the large tree branches above you. Up ahead in the distance is a beautiful dogwood tree, its delicate white blossoms glistening in the sunshine. But alas, dark clouds are moving in, the wind rises and begins to gust. A storm has come. As rain begins to pelt the beautiful dogwood, it bends and bows in the in the wind. The petals try to hold on tightly, some blow away, and others become tattered by the pelting rain but hold on.

Soon the storm passes, you look up to see the clouds have blown away and along with them goes the rain as the sun returns. The little dogwood is no longer bending but upright again. The delicate flower petals, though bruised, are still lovely enough for those around to enjoy their beautiful contribution to the world.

Medicine is in a time of change. Stormy days are upon us. None of us knows what the profession will look like in ten years or for that matter next year. The only definite certainty at this time is uncertainty.

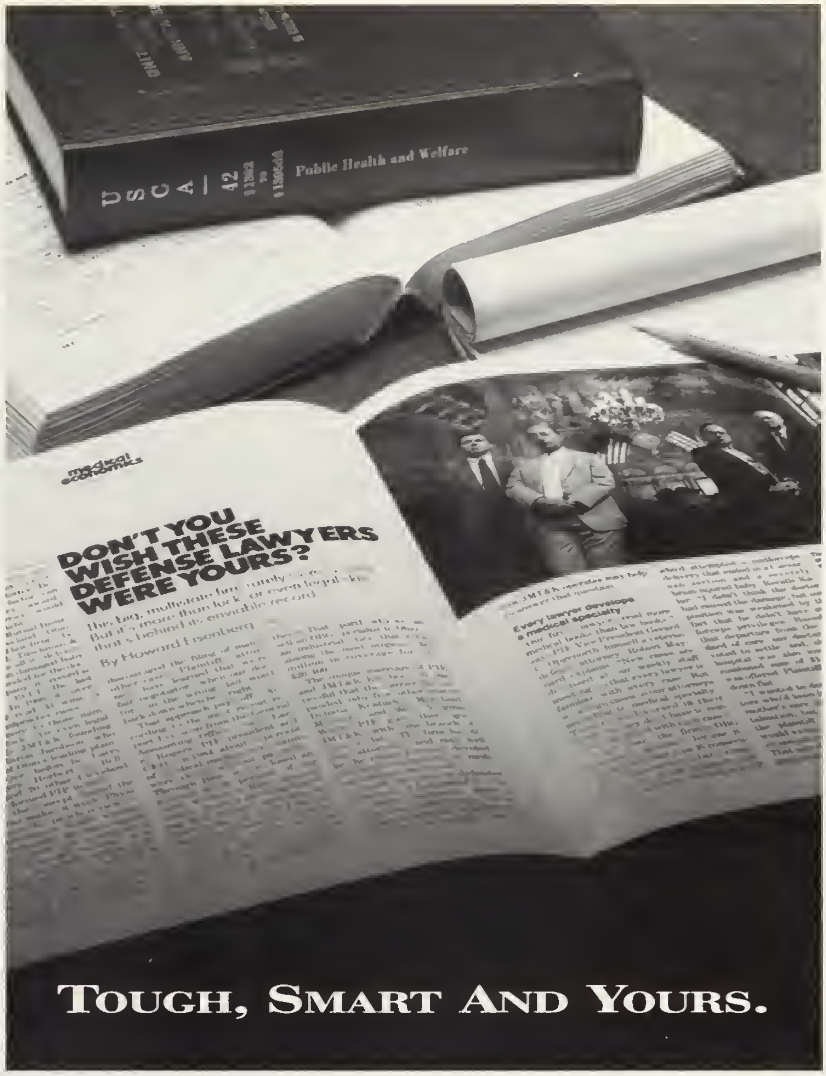
While I was planning meetings and setting up committees for the coming year, I spoke to members across the state. The comments were much the same. Everyone was worried. Like the blossoms being pelted by rain, we are being pelted by managed care, hospitals' buying practices, physicians' aligning with hospitals and often against each other. County medical societies, once the forum for sharing ideas, education and fellowship, are becoming weaker. They are no longer the glue holding the medical community together. The question now arises: "What is a medical community?"

In a time of crisis such as illness, we rely on our family and friends. The profession of medicine is in crisis. Change is unsettling and we feel a sadness for the loss of the profession and way of life as we once knew it. As part of the profession, we also need help. Thus we must rely on our family is the medical community (physicians and their families). We must come together and unify if we are going to weather this reform of health care. Medicine is our profession for life, our security, our way of contributing to society. By caring for others, we are able to give back for all our blessings.

The large trees of the woods - government, insurance companies, hospital corporations - are not able to address the needs of the questioning patient or speak to the frustrated physician. Change forced upon them has primarily been to look at economics, the restructuring of 1/7 of the nation's economy. We all know economics plays a part in health reform and our practices too, but it is not at the heart of why we are in medicine. We must not remain alone in our struggle as medicine is redefined, but together share ideas, serve our patients, educate each other and our communities and most of all continue our friendships. As Dr. James Todd, Executive Director of the AMA, recently stated, "Since antiquity medicine has survived the rise and fall of empires, change of kings and presidents, war and peace and through it all has remained constant. Medicine is still the most wonderful profession there is."

We must work for change that is for the better, not the worse, change that will help not hurt, and change that puts people first.

To everything there is a season and time to every purpose under the heaven, (Eccles. Ch 3, V.1). The season is spring, the time is now, the purpose of the year ahead is to bond together for the glory of our healing profession. ■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# Physician Leadership: Directing the Health Care of the Local Community

Tom Bennett, Executive Vice President MSMS, Inc.

During my recent travels throughout the State during the past three months I have had the opportunity to meet with many members of the Missouri State Medical Association. In most of these meetings there has been lively debate and discussion concerning the following issues:

- Physicians have lost control over patient care management and have been left out of the decision making process as it pertains to health care policy, planning and resource allocation.
- Physicians lack the organizational structure to regain control of the above.
- Hospital executives have outmaneuvered the medical staff in the areas of control and governance of hospitals and related organizations, including PHOs.
- Corporate headquarters of not-for-profit systems are controlling the boards of local hospitals, hence local autonomy is being eroded, hospital executives are becoming the pawns of corporate systems, and the hospital and community financial resources potentially can be transferred out of the community.
- Many primary care physicians are losing their autonomy and objectivity as it pertains to patient care management by being bought out and becoming employees of hospitals.
- The major participants in the decision making process with regard to patient care management include hospitals, managed care organizations, and the buyers (big business and the federal and state governments). Excluded are two major constituents, namely physicians and patients!
- The model that is being created is more of an economic model rather than a medical model of health care delivery.

My response to these issues is simple: if there is physician leadership within the hospital and community, then there is the potential to forge change and to coalesce parties to resolve these problems. Underlying this aspect of physician leadership is the principle that: "Health care is LOCAL. It always was and always will be. It is delivered in hospitals that serve the community. It is delivered in physicians' offices by health care professionals who live and work alongside their patients. It is an immunization shot at the local clinic, a fitness class at the YMCA, geriatric care at the local nursing home."[1] Health care delivery and health care policy must be community driven and community focused.

Physician leaders must focus their skills and efforts on patients and the health care needs of their community otherwise their actions may be perceived as selfish and self-serving. They must possess political and diplomatic skills to bring about the coalition of hospital executives, hospital board members, civic leaders, education leaders, representatives from public health and allied health, leaders of businesses both large and small, and patient advocates. The physician leaders must constitute these members into an active, dynamic committee that will execute a plan that will address these needs over both the short term and long term. The focus should be on health promotion rather than the treatment of disease.

In order for physician leaders to be effective they must do the following:

- They must educate the hospital board members, business leaders, political leaders, and patient advocates that physicians can creatively provide more affordable, more accessible and more efficient health care through better organized office based settings. They must emphasize that the high cost of health care is generated by hospitals. (For every $1 that is spent on physician services there are $9 spent for hospital services.)
- They must educate the community leaders that hospitals are attempting to buy primary care and specialty practices in order to control patients and the revenue streams generated by them.
- They must obtain representation on the boards of hospitals in order to offer the medical staff point of view concerning patient care management issues, policy and resource allocation.

**Continued on page 326**

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Continued from page 324

- They must encourage hospital board members to include in their ranks patient advocates to ensure that the decisions being made are in the best interest of the community as a whole.
- They must learn to use patients as their best allies in order to effect change. Patients can be a potent political force.

Missouri State Medical Services, Inc. has developed a strategic planning document that addresses the issue of physician leadership in community health care planning. I encourage you to obtain this document to help you guide the future of health care in your community.

As Abigail Adams stated in a letter to Thomas Jefferson, "These are hard times in which a genius would wish to live...Great necessity calls forth great leaders."[2] And great physician leaders are needed now in these hard times which constitute our current health care environment. ■

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1. Blue Indigo: *A Community Health Program*. Indigo Institute, Washington, D.C. 1994.
2. Bennis, W. *On Becoming a Leader*. Mass.: Addison-Wesley, 1989. p. 189.

**Suggest reading:**

1) *On Becoming a Leader*. Warren Bennis, Addison-Wesley Publishing Company, 1989.
2) *Leaders: The Strategies for Taking Charge*. Warren Bennis and Burt Nanus. Harper and Rowe, 1985.

*I wish to acknowledge Lewis Vollmar, Jr., MD, MBA, MA for his help on this paper.*

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# Ophthalmology Quiz #7

John C. Hagan III, MD

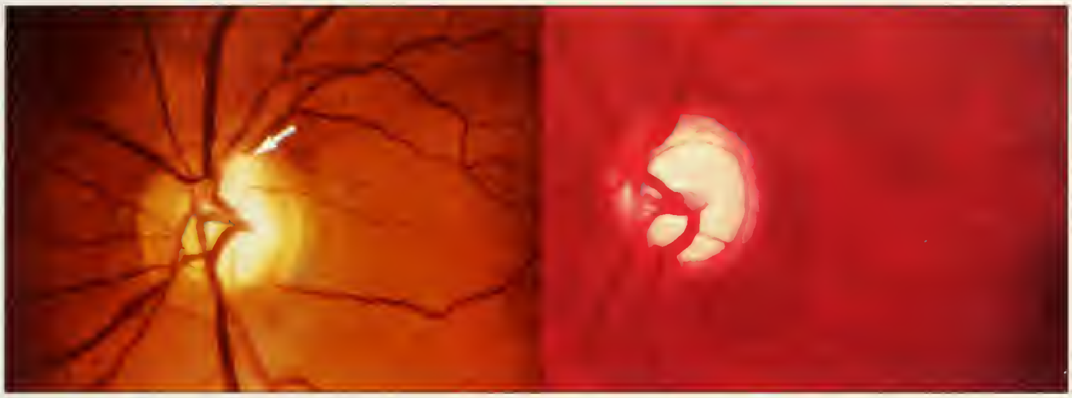


Figure 1 - RIGHT EYE

Figure 2 - LEFT EYE

This 76-year-old black woman presented for a headache evaluation. The fundoscopic examination of the optic nerves is shown above. She has not had an eye examination in over 10 years. Her Schiotz tonometry readings and intraocular pressure were normal in both eyes (19 mm Hg.) when checked the same time as blood pressure (156/98).

1. What is the best diagnosis for her optic nerve condition?
   a. Arteritic (Giant Cell Arteritis) optic neuritis
   b. Primary optic atrophy
   c. Glaucomatous cupping of optic nerve
   d. Normal optic nerve

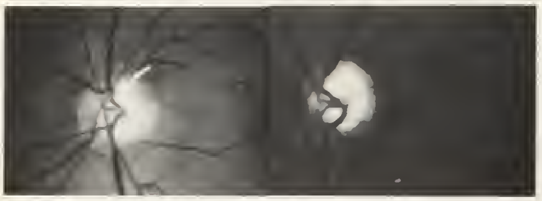
2. What fraction best represents the cup to disc (C/D) ratio in the left eye?
   a. 0.2 or 20% or less
   b. 0.4 or 40%
   c. 0.6 or 60%
   d. 0.8 or 80% or more

(See answers on next page.)

# OPHTHALMOLOGY QUIZ ANSWER

(Ophthalmology Questions are on previous page.)

Answers
1. c. Glaucomatous cupping of optic nerves
2. d. 0.8 or 80% or more



Glaucoma is one of the leading causes of blindness in the world and the single most important cause of blindness in African-Americans. Glaucoma accounts for 14 percent of all blindness and occurs in about 2% of the population. The prevalence increases with age and as many as 5-7% of patients in their 80's have glaucoma. Glaucoma is an insidious disease and is virtually asymptomatic in most patients. With early detection and treatment most blindness from glaucoma can be prevented. The primary care physician plays a vital role in preventing visual loss from glaucoma. By identifying patients at risk for glaucoma, measuring intraocular pressure and critically evaluating the optic nerve head (disc) for glaucomatous cupping, the primary care physician can very often help detect glaucoma at an early stage before visual loss occurs. Once glaucoma is suspected, referral to an ophthalmologist for further diagnosis and treatment is crucial to preserve sight.

Glaucoma is a group of diseases in which there is an elevation of intraocular pressure high enough to result in damage to the optic nerve and field of vision. Glaucoma cannot be defined simply as an elevation in intraocular pressure since different people tolerate different levels of pressure. Some people (glaucoma suspects) with markedly elevated intraocular pressures do not develop damage from the disease, while others (low tension glaucoma) develop damage with no apparent abnormal increase in pressure. In addition, because intraocular pressures fluctuate (diurnal curve) from one hour to the next, as many as 20% of glaucoma patients may have normal pressure (like the case presented) when they are first examined. Therefore as in the case presented *a normal intraocular pressure does not rule out glaucoma* especially with cupping of the optic disc and multiple risk factors (elderly, Afro-American).

Despite problems surrounding the measurement and predictive value of intraocular pressure levels, there is a significant correlation between elevated pressures and damage from glaucoma. Normal intraocular pressure varies from hour to hour and ranges from 9 to 21 mm Hg. Intraocular pressures over 21 are potentially dangerous and suggest the possibility of glaucoma.

An important early indicator of glaucomatous damage is pathologic cupping of the optic nerve head that

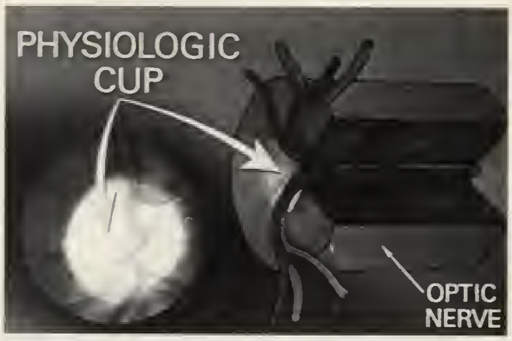


**FIGURE 1 - Physiologic cup. This figure demonstrates the location of the physiologic cup relative to the optic disc. The illuminated circle represents the field of view of the direct ophthalmoscope.**

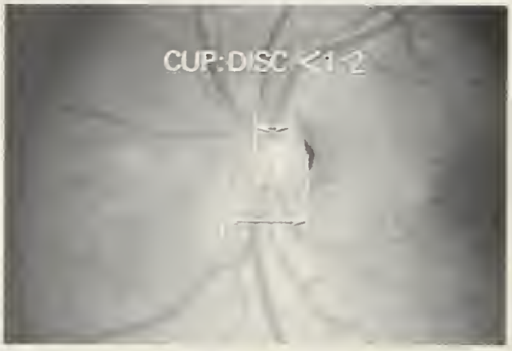


**FIGURE 2 - Cup/disc ratio. The cup/disc ratio shown here is 0.4 or 40%. The cup is slightly less than one half the diameter of the disc.**

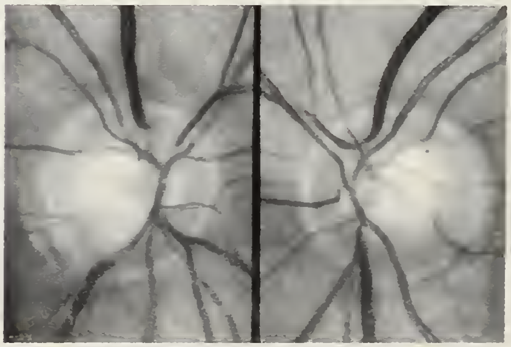


**FIGURE 3 - Cup/disc ratio asymmetry. This is a right and left eye from the same patient taken at the same time. The optic nerve C/D ratio in the picture on the right is significantly larger than the other eye.**

can be seen with an ophthalmoscope. Normally, the optic disc is flat or slightly elevated, (Figure 1) with a small pale central area called the physiologic cup. One commonly used description (Figure 2) of the optic disc is the ratio of the horizontal diameter of the cup to that of the disc, or the cup/disc (C/D) ratio. A cup larger than one half the size of the disc i.e. a cup/disc ratio greater than 0.5 or 50% is suspicious. The larger the cup, the greater the possibility of a glaucomatous optic nerve. The optic discs nearly always appear symmetric. Asymmetry (Figure 3) should arouse suspicion. Other signs of glaucoma damage can include vertical extension of the cup, notching of the neural rim, (right eye, single arrow), pallor, nasal displacement of the vessels and splinter hemorrhage on the disc edge.

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1. Terry J. Bergston: Information about Glaucoma: A slide-script program. American Academy of Ophthalmology; San Francisco 1983

2. American Academy of Ophthalmology: *Basic Ophthalmology for medical students and primary care residents.* 6th Edition, Frank G. Berson, Editor. San Francisco

**The Ophthalmology Quiz is produced and coordinated by John C. Hagan III, MD, Director, Midwest Eye Institute of Kansas City, Inc., North Kansas City, Missouri. Financial support for this feature is provided by ALCON SURGICAL, North Kansas City Hospital, Missouri Ophthalmological Society, Inc., CHIRON, Inc., MERCK & CO. Inc., O. H. Gerry Optical Co. and IOPTEX , Inc.**

### Guidelines for Referral to Ophthalmologist for Glaucoma Evaluation

- Intraocular pressure over 21.5 mm Hg (Schiotz reading 3.5 or less with 5.5 gram plunger load).
- Intraocular pressure not elevated, but a difference of 5 mm Hg or more (2 Schiotz scale units) between the eyes.
- An optic cup diameter greater than one half the disc diameter (i.e., a cup/disc ratio of 0.6 (60%) or greater).
- One cup significantly larger than that of the other eye.
- A family history of glaucoma.
- Symptoms of acute angle glaucoma: pain, blurred or smoky vision, halos around lights, red eye, fixed pupil, cloudy, edematous cornea, headache, nausea, vomiting, abdominal pain.
- Any patient with no examination by Ophthalmologist or Optometrist in > 5 years.

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*Daniel Stern*
*St. Louis, Missouri*

*David Weitlich*
*University of Missouri*

*Scott Chalene*
*Springfield, Missouri*

# Missouri State Medical Association 136th Annual Convention

*Westin Crown Center - Kansas City, Missouri • April 7 - 10, 1994*

## FIRST SESSION

The First Session of the MSMA House of Delegates was called to order at 10:00 a.m., Thursday, April 7, 1994, by speaker of the house James B. Wolfe, MD. The following officers and delegates were present during the 136th Annual Meeting:

### OFFICERS

| | |
|---|---|
| President | Melvin C. Kasten, MD, *Cape Girardeau* |
| President-elect | H. Jerry Murrell, MD, *Columbia* |
| Immediate Past Pres. | Carol F. Williams, MD, *St. Louis* |
| Vice President | Thomas C. Sparkman, MD, *Cape Girardeau* |
| Vice President | Jonathon D. Dehner, MD, *St. Louis* |
| Vice President | Diane T. Brukardt, MD, *Columbia* |
| Secretary | Norman P. Knowlton, III, MD, *Springfield* |
| Treasurer | David Wilkinson, MD, *St. Louis* |
| Speaker | James B. Wolfe, MD, *Springfield* |
| Vice Speaker | Frederick DeFeo, MD, *Kansas City* |

### COUNCILORS

| | |
|---|---|
| District 1 | Stephen Vilmer, MD, *N. Kansas City* |
| District 2 | Carl R. Kruse, MD, *Palmyra* |
| District 3 | Gordon M. Goldman, MD, *St. Louis* |
| District 3 | Robert N. Miller, MD, *St. Louis* |
| District 3 | Arturo Montes, MD, *Florissant* |
| District 3 | Daniel O'Sullivan, MD, *St. Louis* |
| District 3 | Meredith Payne, MD, *Chesterfield* |
| District 3 | Frederick Peterson, MD, *St. Louis* |
| District 4 | Sammy L. Farrell, MD, *Washington* |
| District 5 | Jerry Kennett, MD, *Columbia* |
| District 5 | Robert P. Wankum, MD, *Jefferson City* |
| District 6 | A. J. Campbell, MD, *Sedalia* |
| District 7 | Steven E. Buie, MD, *Lee's Summit* |
| District 7 | William E. Dorzab, MD, *Kansas City* |
| District 7 | Robert T. Gibbons, Jr., MD, *Overland Pk, KS* |
| District 7 | Frederick W. Hahn, MD, *Independence* |
| District 8 | David W. Hall, MD, *Rogersville* |
| District 8 | Duane Hellam, MD, *Springfield* |
| District 9 | David O. Barbe, MD, *Mountain Grove* |
| District 10 | William C. Shell, MD, *Sikeston* |
| HMSS Councilor | Charles Barbee, MD, *Columbia* |
| Student | Mr. Chris Hinrichs, *Kansas City* |

### VICE COUNCILORS

| | |
|---|---|
| District 1 | Robert Schaaf, MD, *Gower* |
| District 2 | Lent C. Johnson, MD, *Hannibal* |
| District 3 | Newton B. White, MD, *St. Louis* |
| District 4 | Jeffrey Copeland, MD, *St. Charles* |
| District 5 | Joseph A. Corrado, MD, *Mexico* |
| District 6 | Jerry Meyer, MD, *Concordia* |
| District 7 | Linda Dorzab, MD, *Overland Park, KS* |
| District 8 | Clarence A. Martin, MD, *Joplin* |
| District 10 | Mark C. Kasten, MD, *Cape Girardeau* |
| RPS | Robert Swanson, MD, *Ballwin* |
| HMSS | Luis Anglo, MD, *St. Louis* |
| Student | Mr. Samuel Hughes, *Columbia* |

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Dr. H

**MSMA President Melvin C. Kasten, MD, presents the Citizenship and Community Service Award to State Representative Thomas M. Macdonnell, MD.**

### AMA Delegates

George Bohigian, MD, *St. Louis*
Walter A. German, MD, *Springfield*
Robert T. Gibbons, Jr., MD, *Overland Park, KS*
William Huffaker, MD, *Chesterfield*
Melvin C. Kasten, MD, *Cape Girardeau*
Robert MacDonald, Jr., MD, *St. Louis*
Hugh Stephenson, Jr., MD, *Columbia*

### AMA Alternate Delegates

H. Peter Ekern, MD, *Mexico*
David W. Hall, MD, *Rogersville*
Jack Kayes, MD, *St. Louis*
Lawrence Rues, MD, *Kansas City*
Jo-Ellyn M. Ryall, MD, *St. Louis*
Carl Strauss, MD, *Kansas City*
Ms. Mary L. Vest, *St. Louis*

**Continued on page 332**

Continued from page 331

## DELEGATES

### District 1

| | |
|---|---|
| Buchanan | James F. Conant, MD, *St. Joseph* |
| Buchanan | Robert Corder, MD, *St. Joseph* |
| Buchanan | John Corzine, DO, *St. Joseph* |
| Buchanan | James Kline, MD, *St. Joseph* |
| Buchanan | B.A. Moranville II, MD, *St. Joseph* |
| Buchanan | Robert O. Schaaf, MD, *Gower* |
| Clay-Platte | Donald A. Fakhoury, MD, *Kansas City* |
| Clay-Platte | Donald E. Kuenzi, MD, *Kansas City* |
| Clay-Platte | Stephen McCray, MD, *N. Kansas City* |
| Clay-Platte | Scott J. McKnight, MD, *Liberty* |
| Clay-Platte | James L. Stewart, MD, *Weatherby Lake* |
| Clay-Platte | Frederick E. Thompson, MD, *Liberty* |
| Grand River | John R. Dixon, MD, *Brookfield* |

### District 2

| | |
|---|---|
| Northeast | Sandra Ahlum, MD, *Hannibal* |
| Northeast | Michael Bukstein, MD, *Hannibal* |
| Northeast | Vance Dell, MD, *Hannibal* |
| Northeast | Stephen Halpin, MD, *Hannibal* |
| Northeast | Edward Plowman, MD, *Hannibal* |

### District 3

| | |
|---|---|
| St. Louis Metropolitan | George Alexander, MD, *St. Louis* |
| St. Louis Metropolitan | Craig E. Aubuchon, MD, *St. Louis* |
| St. Louis Metropolitan | Luis B. Anglo, MD, *St. Louis* |
| St. Louis Metropolitan | John T. Anstey, MD, *St. Ann* |
| St. Louis Metropolitan | George Bohigian, MD, *St. Louis* |
| St. Louis Metropolitan | Robert V. Brennan, MD, *St. Louis* |
| St. Louis Metropolitan | Kenneth Bruns, MD, *St. Louis* |
| St. Louis Metropolitan | Edmond Cabbabe, MD, *St. Louis* |
| St. Louis Metropolitan | Octavio Chirino, MD, *St. Louis* |
| St. Louis Metropolitan | Patrick Coyne, MD, *Florissant* |
| St. Louis Metropolitan | Jack L. Croughan, MD, *St. Louis* |
| St. Louis Metropolitan | Jonathon Dehner, MD, *St. Louis* |
| St. Louis Metropolitan | James Diestelhorst, MD, *St. Louis* |
| St. Louis Metropolitan | Ronald G. Evens, MD, *St. Louis* |
| St. Louis Metropolitan | Daniel C. Fabito, MD, *St. Louis* |
| St. Louis Metropolitan | Linda A. Fisher, MD, *St. Louis* |
| St. Louis Metropolitan | Arthur H. Gale, MD, *St. Louis* |
| St. Louis Metropolitan | E. Richard Graviss, MD, *St. Louis* |
| St. Louis Metropolitan | William Huffaker, MD, *Chesterfield* |
| St. Louis Metropolitan | Donald R. Ingram, MD, *Festus* |
| St. Louis Metropolitan | Timothy R. Jones, MD, *St. Louis* |
| St. Louis Metropolitan | Robert S. Karsh, MD, *St. Louis* |
| St. Louis Metropolitan | Jack Kayes, MD, *St. Louis* |
| St. Louis Metropolitan | Bruce A. Kraemer, MD, *St. Louis* |
| St. Louis Metropolitan | Jerome L. L'Ecuyer, MD, *St. Louis* |
| St. Louis Metropolitan | John M. Laird, MD, *St. Louis* |
| St. Louis Metropolitan | William Leightner, *MD, St. Louis* |
| St. Louis Metropolitan | Robert MacDonald, MD, *St. Louis* |
| St. Louis Metropolitan | Ravi Mehra, MD, *St. Louis* |
| St. Louis Metropolitan | Suzanne L. Miller, MD, *Grover* |
| St. Louis Metropolitan | Emil F. Miskovsky, MD, *Bridgeton* |
| St. Louis Metropolitan | K. Lynne Mortiz, MD, *St. Louis* |
| St. Louis Metropolitan | Alan H. Morris, MD, *St. Louis* |
| St. Louis Metropolitan | J. Gail Neely, MD, *St. Louis* |
| St. Louis Metropolitan | Charles Norland, MD, *St. Louis* |
| St. Louis Metropolitan | Carl C. Pearman, MD, *St. Louis* |
| St. Louis Metropolitan | David M. Reisler, MD, *Chesterfield* |
| St. Louis Metropolitan | John L. Rollo, MD, *St. Louis* |
| St. Louis Metropolitan | Jo-Ellyn M. Ryall, MD, *St. Louis* |
| St. Louis Metropolitan | Stephen G. Slocum, MD, *St. Louis* |
| St. Louis Metropolitan | Kenneth Smith Jr., MD, *St. Louis* |
| St. Louis Metropolitan | John A. Stith, MD, *St. Louis* |
| St. Louis Metropolitan | J. Regan Thomas, MD, *St. Louis* |
| St. Louis Metropolitan | Randall Treadwell, MD, *Alton, IL* |
| St. Louis Metropolitan | Harvey Walker Jr., MD, *St. Louis* |
| St. Louis Metropolitan | Joseph W. West, MD, *St. Louis* |
| St. Louis Metropolitan | David Wilkinson, MD, *St. Louis* |
| St. Louis Metropolitan | Kenneth Zehnder, MD, *St. Louis* |
| St. Louis Metropolitan | J. Michael Zylka, MD, *St. Louis* |

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ASSOCIA

**William E. Jacott, MD, Vice Chairman, AMA Board of Trustees, reports on the current status of health system reform to the House of Delegates.**

### Alternate Delegates

| | |
|---|---|
| St. Louis Metropolitan | Richard V. Bradley, *MD, St. Louis* |
| St. Louis Metropolitan | Christine C. Cernik, MD, *St. Louis* |
| St. Louis Metropolitan | August W. Geise, MD, *Chesterfield* |
| St. Louis Metropolitan | Francis Lieb, MD, *Richmond, VA* |
| St. Louis Metropolitan | Allan H. McCown, MD, *St. Louis* |
| St. Louis Metropolitan | Stephen A. Wexler, MD, *St. Louis* |
| St. Louis Metropolitan | Newton B. White, MD, *St. Louis* |
| St. Louis Metropolitan | Martin B. Wice, MD, *St. Louis* |
| St. Louis Metropolitan | Carol F. Williams, MD, *St. Louis* |

### District 4

| | |
|---|---|
| St. Charles-Lincoln | Jeffrey Copeland, MD, *St. Charles* |
| St. Charles-Lincoln | Ferd DelPizzo, MD, *St. Charles* |
| St. Charles-Lincoln | Gerald Fleer, MD, *St. Charles* |
| St. Charles-Lincoln | Dennis Keesal, MD, *St. Charles* |

### District 5

| | |
|---|---|
| Audrain | Nancy J. Bunge, MD, *Mexico* |

| | |
|---|---|
| Boone | William C. Allen, MD, *Columbia* |
| Boone | Diane Brukardt, MD, *Columbia* |
| Boone | William J. Crowley Jr., MD, *Columbia* |
| Boone | Jag Devkota, MD, *Columbia* |
| Boone | Ted Groshong, MD, *Columbia* |
| Boone | Richard Heimburger, MD, *Columbia* |
| Boone | Dennis R. Knudson, MD, *Columbia* |
| Boone | Kenneth Rall, MD, *Independence* |
| Boone | Dorothy Rodgers, MD, *Columbia* |
| Cole | H. Kanagawa, MD, *Jefferson City* |
| Cole | William R. Kimlinger, MD, *Jefferson City* |
| Cole | Randall Meyer, MD, *Jefferson City* |
| Lake of the Ozarks | Roger Francis, MD, *Osage Beach* |
| Lake of the Ozarks | M. R. Pete Hayden, MD, *Camdenton* |
| Lake of the Ozarks | Ruth Kauffman, MD, *Versailles* |
| Lake of the Ozarks | Carl Petit, MD, *Osage Beach* |

**Alternate Delegates**

| | |
|---|---|
| Audrain | Steven J. Taylor, MD, *Mexico* |
| Lake of the Ozarks | James Allen, MD, *Four Seasons* |

**District 6**

| | |
|---|---|
| Lafayette-Ray | William LaHue, MD, *Lexington* |
| Lafayette-Ray | Charles Riley, MD, *Richmond* |
| Pettis | Phillip M. Hornbostel, MD, *Sedalia* |
| Saline | Melanie Elfrink, MD, *Marshall* |
| West Central | Tom Batty, MD, *Eldorado Springs* |
| West Central | Gerald Lee, MD, *Kansas City* |
| West Central | Warren Lovinger, MD, *Nevada* |
| West Central | Bill Turner, MD, *Nevada* |

**Alternate Delegates**

| | |
|---|---|
| Henry | C. Rob Wetzel, MD, *Clinton* |
| West Central | Ted Moore, MD, *Nevada* |

**District 7**

| | |
|---|---|
| Metro Med of K.C. | Thomas Allen, MD, *Kansas City* |
| Metro Med of K.C. | Jennifer Ashby, MD, *Kansas City* |
| Metro Med of K.C. | Steven Bowlin, MD, *Kansas City* |
| Metro Med of K.C. | Wm Bradshaw, MD, *Kansas City* |
| Metro Med of K.C. | Barb Buchanan, MD, *Kansas City* |
| Metro Med of K.C. | Richard Butin, MD, *Kansas City* |
| Metro Med of K.C. | William F. Case, MD, *Kansas City* |
| Metro Med of K.C. | Edwin Conner, MD, *Kansas City* |
| Metro Med of K.C. | G. David Dixon, MD, *Kansas City* |
| Metro Med of K.C. | Luke Dlabal Jr., MD, *Independence* |
| Metro Med of K.C. | Linda Dorzab, MD, *Overland Pk, KS* |
| Metro Med of K.C. | Lawrence Evans, MD, *Kansas City* |
| Metro Med of K.C. | Richard Gutknecht, MD, *Independence* |
| Metro Med of K.C. | Douglas Hagen, MD, *Kansas City* |
| Metro Med of K.C. | Gregg R. Laiben, MD, *Kansas City* |
| Metro Med of K.C. | G. Keith Jantz, MD, *Kansas City* |
| Metro Med of K.C. | Marvin Kahn, MD, *Kansas City* |
| Metro Med of K.C. | Pierre Keitges, MD, *Overland Park, KS* |
| Metro Med of K.C. | J. H. Morris, MD, *Independence* |
| Metro Med of K.C. | Carl M. Myers, MD, *Platte City* |
| Metro Med of K.C. | Richard Nelson, MD, *Kansas City* |
| Metro Med of K.C. | Gale B. Oleson, MD, *Blue Springs* |
| Metro Med of K.C. | Sharon Prohaska, MD, *Kansas City* |
| Metro Med of K.C. | Arturo Quiason, MD, *Independence* |
| Metro Med of K.C. | Philip Reister, MD, *Kansas City* |
| Metro Med of K.C. | Wade Robinett, MD, *Kansas City* |
| Metro Med of K.C. | Larry Rues, MD, *Kansas City* |
| Metro Med of K.C. | Carl D. Siegel, MD, *Kansas City* |

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**Henry E. Golembesky, MD, Director, Integrated System Delivery Practice, APM Incorp., San Francisco, California, speaks to the House. He also conducted a practice management seminar.**

| | |
|---|---|
| Metro Med of K.C. | Donald Stillie, DO, *Kansas City* |
| Metro Med of K.C. | Carl F. Strauss, MD, *Kansas City* |
| Metro Med of K.C. | Marc Taormina, MD, *Independence* |
| Metro Med of K.C. | Nalini Tella, MD, *Kansas City* |
| Metro Med of K.C. | Melvin Troeh, MD, *Independence* |
| Metro Med of K.C. | Charles Van Way III, MD, *Kansas City* |
| Metro Med of K.C. | Daniel Whitman, MD, *Kansas City* |

**District 8**

| | |
|---|---|
| Greene | Roger Cady, MD, *Springfield* |
| Greene | Mike Clarke, MD, *Springfield* |
| Greene | Karel DeLeeuw, MD, *Springfield* |
| Greene | Darrel Domann, MD, *Springfield* |
| Greene | Charles H'Doubler, MD, *Springfield* |
| Greene | Michael Hoeman, MD, *Springfield* |
| Greene | Bill Horton, MD, *Springfield* |
| Greene | Norman Knowlton, MD, *Springfield* |
| Greene | Keith LaFerriere, MD, *Springfield* |
| Greene | Hal Lurie, MD, *Springfield* |
| Greene | Marc McCorcle, MD, *Springfield* |
| Greene | DeArmond Moore, MD, *Springfield* |
| Greene | Teresa Olsen, MD, *Springfield* |
| Greene | Lisa Ovens, MD, *Springfield* |
| Greene | Stanley Peterson, MD, *Springfield* |
| Greene | Arteso Raborar, MD, *Springfield* |
| Greene | Stephen Reeder, MD, *Springfield* |
| Greene | Wayne Stine, MD, *Springfield* |
| Greene | Norman Wall, MD, *Springfield* |
| Greene | Arlen Winsky, MD, *Springfield* |
| Greene | Robert Zahn, MD, *Springfield* |
| D-H-P-D | Donald Cole, MD, *Springfield* |
| Jasper | Jeff Jones, MD, *Joplin* |
| Jasper | Clarence Martin, MD, *Joplin* |
| Jasper | Thomas Moore, MD, *Joplin* |
| Jasper | I. Joe Pryor, MD, *Joplin* |
| Jasper | Howard H. Roberts, MD, *Joplin* |
| Jasper | Duane Sherrod, MD, *Joplin* |
| Webster | T. M. Macdonnell, MD, *Marshfield* |

**Continued on page 334**

Continued from page 333

**Alternate Delegates**

| | |
|---|---|
| Greene | Wayne Miles, MD, *Springfield* |
| Greene | Wilfred Wooldridge, MD, *Springfield* |

**District 9**

| | |
|---|---|
| Mid-Missouri | Edward R. Jenkins, MD, *Waynesville* |
| Mid-Missouri | Shaw P. Wan, MD, *Rolla* |
| South Central | Laureano Mayuga, MD, *Cabool* |
| South Central | C. F. Smith, MD, Willow Springs |

**District 10**

| | |
|---|---|
| B- W-R-C | Gene Leroux, MD, *Doniphan* |
| B-W-R-C | Jon Parks, MD, *Poplar Bluff* |
| B-W-R-C | Kirby Turner, MD, *Poplar Bluff* |
| Cape Girardeau | Jean A. Chapman, MD, *Cape Girardeau* |
| Cape Girardeau | Theodore J. Glenn, MD, *Cape Girardeau* |
| Cape Girardeau | Mark C. Kasten, MD, *Cape Girardeau* |
| Cape Girardeau | Edwin J. Masters, MD, *Cape Girardeau* |
| Cape Girardeau | Scot G. Pringle, MD, *Cape Girardeau* |
| Cape Girardeau | Thomas Sparkman, MD, *Cape Girardeau* |
| Cape Girardeau | Gregory A. Tobin, MD, *Cape Girardeau* |
| Dunklin | Nicholas Robinson, MD, *Kennett* |
| Jefferson | Alfred D. Shaplin, MD, *Ballwin* |
| Mineral Area | J. David Auner, MD, *Ironton* |
| SEMO | Kenneth Dempsey, MD, *Sikeston* |
| SEMO | Fred Thornton, MD, *Sikeston* |

**Alternate Delegates**

| | |
|---|---|
| B-W-R-C | Ann C. Peick, MD, *Poplar Bluff* |

**Delegates at Large**

Richard V. Bradley, MD, *St. Louis*
Lester R. Bryant, MD, *Columbia*
Frederick G. DeFeo, MD, *Kansas City*
Gary A. Dyer, MD, *St. Joseph*
H. Peter Ekern, MD, *Mexico*
Walter A. German, MD, *Springfield*
E. T. Hansbrough, MD, *Poplar Bluff*
John I. Matthews, MD, *Jefferson City*
Andrew McCanse, MD, *Belton*
E. A. Stricker, MD, *Rolla*
Carol F. Williams, MD, *St. Louis*
James B. Wolfe, MD, *Springfield*
Ronald Youmans, MD, *Prairie Village, KS*

**Resident Physicians Section**

Mark Jaffe, MD, *Kansas City*
Robert G. Swanson, MD, *Ballwin*

**Students**

Dawn Olson Kleindorfer, *St. Louis*
Bob Puchalski, *St. Louis*
Amir Jalali, *Columbia*
Sarah Vogel, *Columbia*

The first session of the House of Delegates began with the presentation of colors and the singing of the national anthem. James B. Wolfe, MD, called the meeting to order. William J. Crowley, MD, chairman of the Committee on Credentials, reported 11 officers, 43 councilors, and 98 delegates were present. The minutes of the 135th Annual Meeting were approved as published in the July 1993 issue of *Missouri Medicine*.

Speaker Wolfe, announced the members of the three reference committees: *Reference Committee A* - Donald A. Cole, MD (chairman), Jean A. Chapman, MD, Richard Gutknetcht, MD, Warren Lovinger, Jr., MD, and Alan Morris, MD. *Reference Committee B* - Kenneth Rall, MD (chairman), Michael D. Hoeman, MD, C. F. Smith, MD, G. Donald Stillie, DO, and J. Michael Zylka, MD. *Reference Committee C* - Randall Treadwell, MD, (chairman), Sandra Ahlum, MD, Daniel C. Fabito, MD, James T. Conant, MD, and Keith Jantz, MD.

President Melvin C. Kasten, MD, addressed the House. His remarks appear on page 348 of this issue. Next President-elect H. Jerry Murrell, MD, updated the House on legislative activities including the status of HB 1622.

Vice-Speaker DeFeo called upon Alliance President Mrs. Elizabeth Huffaker to address the house.

Following Mrs. Huffaker's remarks, Dr. Kasten assisted her in distributing the AMA-ERF checks to the four Missouri medical schools. Stuart Munro, MD, acting associate dean for academic affairs, accepted a check for the University of Missouri-Kansas City. UMKC received $5,464 in designated funds and $1,518 undesignated funds. Hugh Stephenson, Jr., MD, professor emeritus accepted the contributions for the University of Missouri-Columbia. MU received $10,081 designated funds and $3,147 undesignated funds. Patricia Monteleone, MD, dean designate of the St. Louis University School of Medicine received $13,349 designated funds and $8,255 undesignated funds. Edwin Dodson, associate dean for admissions at Washington University School of Medicine received $7,353 designated funds and $3,875 undesignated funds.

Dr. Kasten introduced special guest William Jacott, MD, Vice Chairman of the AMA Board of Trustees. Dr. Jacott is

souri State
dical Association

**President Clinton's Town Hall Meeting in Kansas City draws media coverage. KCTV Channel 5 interviews Carl M. Myers, MD, of Kansas City for a physician's reaction to the President's health system reform plan.**

a family physician, assistant vice president for health sciences, and an associate professor in the department of family practice and community health at the University of Minnesota. He is a diplomate of the American Board of Family Practice and a member of the American Academy of Family Physicians. Dr. Jacott represents the AMA on the Boards of the Joint Commission on Accreditation of Health Care Organizations and the American Association for the Accreditation of Laboratory Animal Care, and represents the AMA Board at the Managed Care Partnership.

Dr. Kasten reported that MMPAC membership is $100 for sustaining members and $250 for SuperPAC.

Richard V. Bradley, MD, gave the MOMEDICO report during which he discussed the stock company's 16 years of success.

Dr. Kasten gave the Appointment of the Committee on Nominations:

| | |
|---|---|
| Second District | Edward Plowman, MD |
| Third District | George Bohigian, MD |
| Fourth District | Jeff Copeland, MD |
| Fifth District | Hugh Stephenson, Jr., MD |
| Sixth District | Phillip Hornbostel, MD |
| Seventh District | Linda Dorzab, MD |
| Eighth District | Norman P. Knowlton, MD |
| Ninth District | Laureano Mayuga, MD |
| Tenth District | Tom Sparkman, MD |
| HMSS | James Redington, MD |
| Student Section | Sarah Vogel |

Speaker Wolfe asked members to stand for a moment of silence in memory of the 60 members who died this year.

Dr. Wolfe then directed the acceptance and placement of eight late resolutions.

After brief announcements the First Session of the MSMA House of Delegates was adjourned.

### SECOND SESSION

The Second Session of the House of Delegates was called to order by Vice-Speaker DeFeo at 4 p.m. Friday, April 8, 1994. Dr. Crowley gave the Supplemental Report of the Committee on Credentials: 10 officers, 33 councilors, 206 delegates were present.

Dr. Kasten presented legislative awards to Senator Sidney B. Johnson (34th Senatorial District), Representative W. T. Dawson (52nd District), Representative Pat Kelly (47th District) and Representative Gary Witt (29th District).

Dr. Kasten then presented a Citizenship and Community Service Award to Thomas M. Macdonnell, MD, of Marshfield, Missouri. He completed the first county-wide polio immunization program in the state. As a Missouri State Representative for District 140, he has represented Webster county since 1986.

Thomas Sparkman, MD, chairman of the Nominating Committee reported the following slate of officers for the ensuing year:

**First District Delegates Stephen McCray, MD, John R. Dixon, MD, Donald E. Kuenzi, MD, and James L. Stewart, MD, prep for a House Session.**

| | |
|---|---|
| President-elect | Frederick W. Hahn, MD, *Kansas City* |
| Vice President | Kenneth Rall, MD, *Columbia* |
| Vice President | Harold Lurie, MD, *Springfield* |
| Vice President | Charles M. Norland, MD, *St. Louis* |
| Speaker | James B. Wolfe, MD, *Springfield* |
| Vice Speaker | Frederick G. DeFeo, MD, *Kansas City* |
| AMA Delegates | Jack Kayes, MD, *St. Louis* |
| | David Hall, MD, *Rogersville* |
| | Jo-Ellyn Ryall, MD, *St. Louis* |
| | Hugh S. Stephenson Jr., MD, *Columbia* |
| Alternate Delegates | Arthur H. Gale, MD, *St. Louis* |
| | Lawrence Rues, MD, *Kansas City* |
| | Jonathon Dehner, MD, *St. Louis* |
| | Carl Strauss, MD, *Kansas City* |
| | David Barbe, MD, *Mountain Grove* |

Vice-Speaker Defeo moved the business of the House to the reports of the Reference Committees. The reports were heard in the order of - C, A & B.

Please note that House Actions on all resolutions appear on pages 338-341 of this issue.

#### Reference Committee C

Randall Treadwell, MD, presented the report of Reference Committee C. The following items were placed on the consent calendar:

*Report of Commission on Continuing Education and Health Manpower*
*Report of the Committee on Continuing Medical Education*
*Report of the Commission on Medical Economics, Third Party Medicine, and Governmental Relations*
*Report of the Ad Hoc Committee on Physician-Directed Organization*

The consent calendar was adopted by the House. The Committee then made recommendations on the following resolutions:

**Continued on page 336**

Continued from page 335

| | |
|---|---|
| Resolution 8 | *Administrative Burdens* |
| Resolution 9 | *PHO Open Enrollment for Qualified Physicians* |
| Resolution 11 | *Clarification of Diagnostic and Procedural Coding* |
| Resolution 16 | *Health Care Market Competition* |
| Resolution 19 | *Physician Credentialling Mechanism* |
| Resolution 27 | *Medicaid Reimbursement for Immunization* |
| Resolution 36 | *Charity Care* |

### Reference Committee A

Donald A. Cole, MD, presented the report of Reference Committee A. The following items were placed on the consent calendar:

*Report of the Blue Ribbon Committee on Malpractice and Tort Reform*

The item was adopted by the House. The Committee then made recommendations on the following resolutions:

| | |
|---|---|
| Resolution 3 | *Dismantling, Modification or Waiver of ERISA* |
| Resolution 4 | *Missouri Health Care Freedom of Choice* |
| Resolution 5 | *Immunizations* |
| Resolution 6 | *Tort Reform* |
| Resolution 7 | *Alternative Dispute Resolution (ADR)* |
| Resolution 13 | *Legislative Reports to be sent to All MSMA Members* |
| Resolution 14 | *MSMA Position on House Bill 1593: Statute of Limitations on Discipline of Licensed Professionals* |
| Resolution 17 | *Physician Immunity from Liability When Reporting Cases of Suspected Child Abuse* |
| Resolution 20 | *Changes in Physician Licensure Law* |
| Resolution 25 | *Release of Information on Disciplinary Hearings* |
| Resolution 26 | *Pediatric Chiropractic* |
| Resolution 31 | *Telemedicine* |
| Resolution 33 | *Implementation of Public Law 102-408* |
| Resolution 34 | *Use of AMA Resources* |
| Resolution 35 | *Increase Cooperation between MSMA and MAOPS* |

### Reference Committee B

Kenneth Rall, MD, presented the report of Reference Committee B. The following items were placed on the consent calendar:

*Report of the President*
*Report of the MSMA Alliance*
*Report of the Committee on Legislative Affairs*
*Report of the Commission on Public Affairs*
*Report of the Secretary*
*Report of the Treasurer*
*Report of the Council on Ethical and Judicial Affairs*
*MSMA Financial Statements*
*Report of the Executive Vice President*
*Council Minutes*
*Report of the Missouri State Medical Foundation*
*MSMF Financial Statement*
*Report of the Physicians Health Committee*
*Report of Physicians Health Foundation Financial Statements*
*Report of the Commission on Interspeciality Medicine*
*Report of the Committee on Publications*

**Keith LaFerriere, MD, delegate from the Eighth District presents a second subsitute Resolution #16.**

The consent calendar was adopted by the House. The Committee then made recommendations on the following resolutions:

| | |
|---|---|
| Resolution 1 | *MSMA Delegates to AMA are Actively Practicing Physicians* |
| Resolution 2 | *A Report on Substance Abuse and Dependency Among Physicians* |
| Resolution 10 | *Expand Program of Public Professional Education* |
| Resolution 12 | *First-Year Practicing Physicians* |
| Resolution 18 | *Use of the Phrase "Health Care Reform"* |
| Resolution 21 | *Educational Needs of the Membership Regarding Statutes, Rules and Regulations Governing the Practice of Medicine in Mo.* |

| | |
|---|---|
| *Resolution 22* | *Seek Legal Counsel at the First Contact by the Missouri State Board of Registration for the Healing Arts Regarding Potential Adverse Actions* |
| *Resolution 23* | *MSMA Guidelines for Chronic Pain Management* |
| *Resolution 24* | *Review of the Investigation Process by the Missouri State Board of Registration for the Healing Arts* |
| *Resolution 28* | *Multiple-year Membership Plan* |
| *Resolution 29* | *MOMEDICO* |
| *Resolution 30* | *Communications Program Reforms* |
| *Resolution 32* | *Documentation for Resolutions to be taken to AMA* |

Following the final reference committee report, the meeting was adjourned.

## THIRD SESSION

The Third Session of the MSMA House of Delegates was called to order by Speaker Wolfe at 7:30 a.m. Sunday, April 10, 1994. Dr. Crowley gave the supplemental Report of the Committee on Credentials: 10 officers, 35 councilors, and 223 delegates were present.

The first item on the agenda was the election of Officers, AMA Delegates and Alternate Delegates. The Nominating Committee presented the slate of officers during the second session (see page 335).

Carl Kruse, MD, placed the nomination of Dr. Hahn as president-elect. William Huffaker, MD, and Carl Myers spoke on behalf of the nomination. Dr. Hahn introduced Marge Hahn, his wife, to the House.

As a result of caucuses, the following members have been elected as Councilors and Vice Councilors:

| | | |
|---|---|---|
| 1st District | Councilor | Stephen Vilmer, MD |
| | Vice Councilor | Robert Schaaf, MD |
| 3rd District | Councilor | Daniel F. O'Sullivan, MD |
| | Vice Councilor | Newton B. White, MD |
| 5th District | Councilors | Jerry Kennett, MD<br>Robert P. Wankum, MD |
| | Vice Councilor | Joseph A. Corrado, MD |
| 7th District | Councilors | William Dorzab, MD<br>Linda Dorzab, MD<br>Robert T. Gibbons, MD |
| | Vice Councilor | Lawrence A. Rues, MD |
| 8thDistrict | Councilor | Duane Hellam, MD |
| 9th District | Councilor | David O. Barbe, MD |
| | Vice Councilor | Edward Jenkins, MD |
| HMSS | Councilor | Charles Barbee, MD |
| | Vice Councilor | Luis Anglo, MD |
| RPS | Councilor | Robert Swanson, MD |
| | Vice Councilor | Andrew Blatt, MD |
| Students | Councilor | Sara Vogel |
| | Vice Councilor | Bob Puchalski |
| Young Physician Section AMA Delegates | | Timothy R. Jones, MD<br>Bruce A. Kraemer, MD |
| Alternate Delegates | | Robert Schaaf, MD<br>Lisa Ovens, MD |

Following the installation of new officers, President H. Jerry Murrell, MD, presented a plaque to Rose Mahon for 25 years of hard work and dedicated service as office manager at the MSMA headquarters. Dr. Murrell also recognized Royal O. Cooper for 25 years of service. Dr. Murrel made the following committee and commission chair appointments:

*Committee on Constitution & Bylaws:* Arteso Raborar, MD
*Physicians' Health Committee:* Tom Anderson, MD
*Committee on Planning:* Phillip Hornbostel, MD
*Commission on Continuing Education and Health Manpower:* Michael W. Vannier, MD
*Commission on Medical Economics, Third Party Medicine and Governmental Relations:* George J. Hruza, MD
*Commission on Medical-Legal Affairs:* O. Gerald Orth, MD
*Commission on Public Affairs:* Steven Bowlin, MD
*Publications Committee:* J. Regan Thomas, MD
*Commission on Interspecialty Medicine:* William Crowley, MD
*Young Physicians Committee:* Nancy Bunge, MD
*Blue Ribbon Committee on Professional Liability and Tort Reform:* Michael Ditmore, MD
*Council on Ethical and Judicial Affairs:* H. Peter Ekern, MD

A motion was adopted to hold the 1999 Annual Convention at the Lake of the Ozarks. Following announcements, Vice-Speaker DeFeo adjourned the House of Delegates.

**Editor's Note:** The complete minutes of the 136th Annual Convention are on file at the MSMA Headquarters, 113 Madison, Jefferson City, Missouri. Any MSMA member interested in viewing the report may do so at the MSMA office.

MISSOURI STATE
MEDICA
ION

**Rose Mahon, MSMA Office Manager, receives recognition for 25 years of service to the association. Rose works at the MSMA headquarters in Jefferson City.**

# Resolutions of the 136th MSMA House of Delegates

**Resolution #1 - MSMA Delegates to AMA are Actively Practicing Physicians** *Not Adopted*

**Resolution #2 - Report on Substance Abuse and Dependency Among Physicians**

"RESOLVED, that the Board of Trustees of the American Medical Association, through appropriate councils and committees, develop and update a report on substance abuse and dependency among physicians, and be distributed to physicians."

*AMA for 1994 Annual Meeting of House of Delegates*

**Resolution #3 - Dismantling, Modification or Waiver of ERISA**

"RESOLVED, that the Missouri State Medical Association (MSMA) and the American Medical Association (AMA) utilize all their resources and energy to inform officials in the executive and legislative branches of state and federal government about the problems associated with ERISA, and be it further

RESOLVED, that the MSMA and AMA lobby for the modification or waiver of ERISA, and be it further

RESOLVED, that the modification or waiver of ERISA become the official policy of the MSMA and AMA, and be it further

RESOLVED, that this resolution be introduced by the Missouri delegation at the AMA Annual Meeting in Chicago in June 1994."

*AMA for 1994 Annual Meeting of House of Delegates; Policy Manual; Contact MO and Federal Executive & Legislative Officials*

**Resolution #4 - Missouri Health Care Freedom of Choice**

"RESOLVED, that the MSMA work within its resources to regain the rights of all its citizens the freedom to choose their own physician, hospital or health care plan without any coercion, economic extortion or any discrimination in any way, and be it further

RESOLVED, that the MSMA will work with all the regional component medical societies, subspecialty societies, family physicians, or any other society or association of citizens' groups toward the goal of restoring an individual's right to choose their own physician and health care plan."

*Committee on Medical Economics; Commission on Interspecialty Medicine; MSMA Component Societies*

**Resolution #5 - Immunization**

"RESOLVED, that the Department of Health and Human Services develop a similar tracking and reminder system for the immunizations of U.S. children, and be it further

RESOLVED, that the Social Security Administration (SSA) not assign permanent Social Security numbers to children until this basic immunization series has been completed — unless there is documented parental refusal on religious grounds — as filed with the SSA, and be it further

RESOLVED, that this resolution be disseminated to the Missouri General Assembly, the U.S. Congress, and the AMA."

*Refer to Council; MO Chapter, American Academy of Pediatrics; Department of Health*

**Resolution #6 - Tort Reform**

"RESOLVED, that the Missouri State Association explore the possibility of a statewide initiative petition on tort reform with other appropriate organizations to place the matter before the people of the State of Missouri."

*Blue Ribbon Committee on Malpractice & Tort Reform Commission on Medical-Legal Affairs; Legislative Committee; Committee to Preserve Health Care*

**Resolution #7 - Alternative Dispute Resolution (ADR)**

*Not adopted*

**Resolution #8 - Administrative Burdens**

*Filed*

**Resolution #9 - PHO Open Enrollment for Qualified Physicians**

"RESOLVED, that MSMA supports open enrollment of qualified physicians in their hospitals' PHOs in order to preserve physicians' right to participate in any health care plan operating in Missouri."

*Committee on Medical Economics; Policy Manual; Legislative Committee; Commission on Interspecialty Medicine; Notify component medical societies*

**Resolution #10 - Expand Program of Public Professional Education**

*See Resolution #30*

**Resolution #11 - Clarification of Diagnostic and for Procedural Coding**

"RESOLVED, that the MSMA AMA Delegation take to the AMA a request for updating of the ICD-9-CM coding system to more accurately reflect modern medical diagnostic knowledge and terminology.

*Referred to Council Action; Committee on Medical Economics; Contact AMA*

**Resolution #12 - First Year Practicing Physicians**
*Not adopted*

**Resolution #13 - Legislative Reports to Be Sent to All MSMA Members**

"RESOLVED, that the MSMA provide a *Legislative Report* weekly to all physician members during the Legislative session to allow them current information and the opportunity to respond to their legislators; and be further

RESOLVED, that the MSMA re-evaluate other publications they produce to determine which of these might provide more response from physicians; and be it finally

RESOLVED, that MSMA explore other electronic methods to disseminate legislative information."

*Sent five 1994 Legislative Reports to all MSMA Members; Council to determine best method to distribute reports; Legislative Committee; Publications Committee; Communications Project*

**Resolution #14 - MSMA Position on HB 1593: Statute of Limitations on Discipline of Licensed Professionals**

"RESOLVED, that MSMA provide support for the creation of a statute of limitations on the discipline of Missouri physicians by the State Board of Registration for the Healing Arts."

*Legislative Committee; State Board of Registration for the Healing Arts*

**Resolution #15 - Charity Care**
*Withdrawn*

**Resolution #16 - Health Care Market Competition**

"RESOLVED, that MSMA educate and instruct its members about the implications of non-compete clauses in contracts between hospitals, provider organizations, and physicians, and be it further

RESOLVED, that MSMA inform its members that Missouri State Medical Services (MSMS) is in place to offer services which will assist physicians in dealing with non-compete clauses."

*Committee on Medical Economics; Missouri State Medical Services; Missouri Medicine & Progress Notes*

**Resolution #17 - Physician Immunity From Liability When Reporting Cases of Suspected Child Abuse**

"RESOLVED, that statutes concerning the evaluation and reporting of child abuse be amended to specifically include immunity for physicians and other mandated reporters who in the process of the investigation, disclose and inform law enforcement agencies of the alleged abuse, and be it further

RESOLVED, that the statues concerning the evaluation and reporting of child abuse delete any language which would allow the initiation of any liability claims, specifically malpractice, with regard to any examination done by physicians who are evaluating an alleged incidence of abuse, be it child physical or sexual abuse, and be it further

RESOLVED, that statues concerning the evaluation and reporting of child abuse include the appropriate use of new technology, i.e. videotape in the photo documentation by physicians and that this format be afforded the same consideration as outlined for color photographs in Missouri Statute 210."

*Legislative Committee; Department of Social Services*

**Resolution #18 - Use of the Phrase "Health Care Reform"**
*Filed*

**Resolution #19 - Physician Credentialing Mechanism**

"RESOLVED, that MSMA provide for Missouri physicians by January 1, 1995 a credentialing mechanism that does not require hospital staff membership."

*Refer to Council for action; MSMA Staff to develop mechanism or use mechanisms presently in place*

Continued on page 340

Gordon Goldman, MD, St. Louis Delegate discusses a resolution in Reference Committee A.

Continued from page 339

**Resolution #20 - Changes in Physician Licensure Law**

"RESOLVED, that the Missouri State Medical Association support legislation granting statutory authority to the Missouri State Board of Registration for the Healing Arts to enter into consent agreements in disciplinary proceedings."

*Legislative Committee; State Board of Registration for the Healing Arts; Division of Professional Registration*

**Resolution #21 - Educational Needs of the Membership Regarding Statutes, Rules & Regulations Governing the Practice of Medicine in Missouri**

"RESOLVED, that MSMA continue to provide ongoing educational activities to meet the needs of their members regarding all statutes, rules and regulations regarding the practice of medicine in Missouri."

*Work with State Board of Registration for the Healing Arts and Bureau of Narcotics & Dangerous Drugs to develop conjoint program*

**Resolution #22 - Seek Legal Counsel at the First Contact by the State Board Regarding Potential Adverse Actions**

"RESOLVED, that MSMA provide physicians investigated by the Missouri State Board of Registration for the Healing Arts, upon their request, a list of attorneys experienced in providing legal counsel, and be it further

RESOLVED, that MSMA encourage physicians being investigated by the Board to seek legal counsel at the first contact by the Missouri State Board of Registration for the Healing Arts regarding potential adverse actions."

*Staff develop list of attorneys; Encourage physicians to seek counsel; Progress Notes*

**Resolution #23 - MSMA Guidelines for Chronic Pain Management**

"RESOLVED, that the Missouri State Medical Association be in favor of incorporation of an Intractable Pain Treatment Act and that such an act be incorporated in our statutes."

*Legislative Committee*

**Resolution #24 - Review of Investigation Process by the Missouri State Board of Registration for the Healing Arts**

"RESOLVED, that MSMA seek ongoing evaluation of the investigations performed by the Missouri State Board of Healing Arts, and be it further

RESOLVED, that the information obtained by these evaluations be disseminated and used to improve the quality and appropriateness of these investigations by the Board of Healing Arts and the qualifications of their investigators."

*Executive Committee*

**Resolution #25 - Release of Information on Disciplinary Hearings** *Not adopted*

**Resolution #26 - Pediatric Chiropractic**

"RESOLVED, that this resolution be introduced by the Missouri Delegation at the AMA Annual Meeting in Chicago in June, 1994 and that the AMA work with the American Academy of Pediatrics to study the scientific evidence regarding pediatric chiropractic and develop guidelines for responding to patients' & parents' questions concerning chiropractic care of children."

*AMA for 1994 Annual Meeting of House of Delegates*

**Resolution #27 - Medicaid Reimbursement for Immunizations**

"RESOLVED, that the Missouri State Medical Association work with the Missouri Medicaid program to reverse policy and again reimburse for immunizations (including oral polio vaccine and TB tines) when billed with other charges on the HCFA-1500 form."

*Refer to Council for action; Committee on Medical Economics; Dept. of Social Services*

**Resolution #28 - Multiple-Year Membership Plan**

"RESOLVED, that MSMA institute a multiple-year membership dues billing option for its medical student dues members."

*Develop multiple year membership dues option for students for 1995 billing cycle*

**Resolution #29 - MOMEDICO**

"RESOLVED, that the MSMA House of Delegates hereby approves entering into negotiations regarding possible transition of the MSMA Class B MOMEDICO Shares, and be it further

RESOLVED, that the MSMA Executive Committee, subject to Council approval, is hereby authorized to take all actions necessary, including negotiating terms of agreements, executing any agreements, amendments, supplements or modifications to such agreements, in connection with completing the transaction, and be it further

RESOLVED, that the MSMA Executive Committee, subject to Council approval, is hereby authorized, empowered and directed to do all such acts and things and to execute, acknowledge, file and deliver all such documents and to pay all such fees, taxes and expenses as may be in the MSMA Executive Committee's discretion, subject to Council approval, be deemed necessary or desirable in order to carry out and comply with the terms and provision of these Resolutions, and all of the acts and undertakings of the MSMA Executive Committee, subject to Council, approval, which conform to the intent and purposes of these Resolutions whether heretofore or hereafter taken or done, shall be and the same are hereby in all respects ratified, conformed, authorized and approved."

*Inform MOMEDICO; Develop agreement for consideration of MSMA Executive Committee & Council*

**Members of Reference Commmittee B - Michael Hoeman, MD, C. F. Smith, MD, Kenneth Rall, MD, Michael J. Zylka and G. Doanld Stille, DO, listen intently to testimony.**

### Resolution #30 - Communication Program Reforms

"RESOLVED, that organized medicine take action to reverse the trend of professionalism in medicine being eroded and replaced by commercialism, be it further

RESOLVED, that the Publications Committee and Public Affairs Commission should develop strong staff capabilities, install necessary equipment, and secure access to the requisite facilities to conduct modern, two-way communication between the MSMA and its internal and external audiences and be it further

RESOLVED, that such a revitalized program will provide for improved educational services, public outreach, and encourage more responsive interactions with and between members, and be it further

RESOLVED, that MSMA will partner where possible with component societies, television stations, state agencies, underwriters, education foundations, and other entities to provide those services in the most effective and economical manner."

*Refer to Publications &Planning Committees; Committee on Continuing Education; Committee on Public Affairs; Committee on Interspecialty Medicine*

### Resolution #31 - Telemedicine

"RESOLVED, that the Missouri State Medical Association urge private and public decision makers in the state of Missouri to:

* provide financial and other support for telemedicine demonstration projects that will help Missourians understand the value of such services, while creating opportunities for additional studies of telemedicine's impact.

* work toward a regulatory and business environment in the State of Missouri that fosters affordable universal access to current telecommunications technology in rural and urban communities."

*Committee on Continuing Education; Committee in Interspecialty Medicine; Legislative Committee*

### Resolution #32 - Documentation for Resolutions to be Taken to AMA

"RESOLVED, that the introducing individual or organization of any MSMA resolutions, which are to be adopted by the MSMA House of Delegates and which have a resolve requiring it to be taken to the AMA House of Delegates for adoption or action, be required to submit background information and supporting documentation as requested by the AMA delegation."

*Contact sponsors of Resolutions as needed*

### Resolution #33 - Implementation of Public Annual Law 102-408

"RESOLVED, that the MSMA Delegates of Delegates to the AMA request that the AMA, through the appropriate channels, work with the Department of Health and Human Services to expedite the implementation of the Health Professionals Reauthorization Act (PL 102-408), and establish the National Advisory Council on Medical Licensure to monitor and review the Private Credential Verification System, and also to monitor the licensing practices of the various states, and be it further

RESOLVED, that this resolution be introduced by the MSMA Delegation to the AMA at the June, 1994 Annual Meeting."

*AMA for 1994 Meeting of House*

### Resolution #34 - Use of AMA Resources

"RESOLVED, that the volunteer leaders and staff of the Missouri State Medical Association seek input and assistance from the AMA's Department of State Legislation and other appropriate departments on a regular basis."

*Staff*

### Resolution #35 - Increase Cooperation between MSMA and MAOPS

RESOLVED, that the Missouri State Medical Association and the Missouri Association of Osteopathic Physicians and Surgeons staff and leadership be encouraged to unify their efforts to increase the physicians' visibility and strength, and further be it

RESOLVED, that this professional relationship be publicly affirmed when appropriate to demonstrate physician unity and concern for maintaining the ability to provide their patients quality medical care; and finally be it

RESOLVED, that MSMA's and MAOPS's coordinated efforts on behalf of the physicians in Missouri, be reported to their respective organizations' member ship on a regular basis."

*Executive Committee & Staff*

### Resolution #36 - Charity Care

*Not adopted*

# We Must Take Charge of Change

Melvin C. Kasten, MD, MSMA Immediate Past President

*Final Address to the House of Delegates*

It has been an honor to have served as your president. When I spoke to you from this podium one year ago, I said "What a year to be your president!" I can honestly say now that this has been an exciting experience for me.

I have been very impressed and pleased to know the serious interest that so many of you have for our national and state medical issues.

Looking back, I see there were many events this past year that stand out in my memory. If you'll bear with me, I'll mention a few of them now, not just because I want to reminisce during my final hour as your president and prove to you that I was paying attention, but because so many of those undertakings are with us still and will demand our continued attention and energy in this coming year.

I think we can remember when the debate on national health care reform rolled into Missouri. It was called "The Midwest Summit on Health Care." It was held here in Kansas City and many of you were here with me when we met with Senators Bond, Danforth, Kassebaum and Dole and debated key points of the Administration's 1,300-page Health Care Plan.

Clearly, the Administration thinks that Missouri will once again play a border state role in the fight for passage of the President's Health Care Plan.

Dr. Carl Strauss represented the physicians' point of view at the Midwest Health Care Summit and his compassion and commitment served us well. He showed our critics that physicians can be sensitive and truly care for patients as persons. When we take a moment to establish our credentials as our patients best advocates, our honest inquiries carry more weight.

This "Summit" gave us one of our first glimpses of the First Lady in action, too. She was eloquent and passionate in her presentation of the Administration's views on health care revision.

Mrs. Clinton has lost none of her ability to deliver a well-polished lecture, and she undoubtedly will continue to do so in the months and years to come.

Meanwhile, we shouldn't lose sight of the fact that many physicians are equally eloquent and just as passionate in their views. And, while few of you will have your faces displayed on the covers of national magazines like TIME, Vanity Fair, or TV Guide, you must take every opportunity to present our side of the argument.

Physicians must convince the Congress and the country of two important ideas: 1) There are no easy answers; and, 2) Physicians want to be involved in the process.

The Midwest summit has faded from the front pages and TV news, but the battle to refine health care - let's dump the word "reform" from the debate - health care refinement continues across the country.

Almost every day now a new plan emerges and floats through the halls of Congress for its allocated fifteen minutes before it, in turn, is replaced by the next alternative plan.

About the only thing the Belt Way bureaucrats in Washington can agree on at this point is that the health care crisis requires a dosage of massive government intervention and control.

My trips to Washington this past year have confirmed my belief that the socialists are alive and well in this country. They will not rest in their labor, I am sure, until they have solved all of society's problems by creating a government bureaucracy to deal with each and every one of them.

Their logic goes like this: Any problem can be solved by creating a government agency and the bigger the problem, the larger the bureaucracy.

Now, our friends in Washington are itching to prove that since health care is such a massive crisis it needs a bureaucracy so vast that the IRS, Post Office and Social Security will look like small potatoes in comparison.

The AMA tries to present organized medicine's view on this colossal overhaul of our health care system, but, I fear, the voice of the practicing physicians is being lost in the presidential posturing, congressional maneuvering, and the media hype that surrounds their tomfoolery.

However, even if the generals in Washington would rather not listen to advice from the peons in the trenches, the critical issues of accessibility, quality, and affordability will not go away until they are dealt with in a fair and intelligent manner.

As physicians, as teachers, we must quietly, but with determination, accelerate our efforts to share our practical medical knowledge with our friends in Congress.

They may not admit it in public, but they need our help to create good public health policy. They've welcomed our help in the past. They will again if we do it right. Our patients deserve such an effort from us. The contest is not over.

Can we be effective? Well, the Missouri delegation to the AMA played a key role in eliminating the provision in the Health Care plan that called for businesses to mandate health care coverage for their employees.

We have been somewhat successful in shaping other clauses in this jumble of complex health care system refinements, too.

You and I and millions of others still have questions about these and other issues that we want answered. How does the government plan to finance universal access? Why should the government be given the power to decide how many primary care physicians should be trained each year and to tell them where to practice?

Suppressing poor legislation is only part of the struggle, however. We must work equally hard to enact legislation that strengthens and promotes good patient care. Affordable insurance, tort reform, streamlining record keeping and paperwork, and other such reforms must remain high on our agenda.

We got a nasty wake up call during the current legislative session here in Missouri. HB 1622 reminds us that reform fever doesn't emanate only from Washington. Some of it is "home grow'ed."

Those of you who have testified in Jefferson City on this bill know, as I do, that this bill is a monster.

This piece of legislation has the rest of the country scratching its head. How did Missouri, the Show Me state, become so revolutionary about refining its health care delivery systems?

This bill is supported by the Governor, the Speaker of the House, and the Speaker Pro Tem of the Senate. You don't have to talk to very many people in the Capitol before you realize that this piece of legislation is backed by the highest levels of our state's executive and legislative branches of government.

Thank Heaven the Chief Justice of the Missouri Supreme Court hasn't blessed it yet!

About the only encouraging thing I can say about HB 1622 at this point is that it has galvanized physicians across the state into action like noting else in recent memory.

Our lobbyists are helping us modify this bill, amendment by amendment, into something that we can accept, and it has a long way to go before it passes out of the House and Senate. But as I said earlier, it has some top level weight behind it.

It seems certain this legislation, in one form or another, will be passed - maybe even this year if we back off an inch.

The battle for good health care legislation began before I was named as your president and I will fearlessly predict that it will continue long after I've gone.

That's why we need to encourage new blood and fresh insight at all levels of our local, state and national medical organizations! If your associates and partners need a reason to get involved in organized medicine, hand them a copy of HB 1622 to read.

No matter how strong in number we become, however, we must not become complacent. We won't have to wait very long before we will be asked to face our own professionalism and autonomy.

Accordingly, we must remember that the lawyers, social engineers and allied professionals who would like very much to control health care will attack us by gaining beach heads into the system through the legislative process.

Oh, they won't try to discredit the entire house of organized medicine - they don't want to destroy, they want to control.

Instead, they will strategically denigrate single specialities and, sometimes, individual physicians.

The more division and distrust they can sow, the stronger their position will become.

By working together, the way many of us did last summer when we helped our neighbors stack sandbags in front of their homes, we can vaccinate ourselves against such attacks with a unity of purpose and commitment to our profession.

As a goose hunter, I have watched flocks of geese fly overhead in their V-formation many times. I have come to believe that the geese back in the formation honk to let the lead goose know that he is doing a good job and to encourage him to fly on into the wind.

That's the way it should be with our efforts, too. Take a moment to honk for those lonely souls who are out there leading the flock.

Helping one another shouldn't blind us to the inevitability of change, however. I'm told that after seven years, an engineer's education is outdated. As fast as things are changing in medicine, seven years sounds like a lifetime.

Innovation will continue to sweep down upon us with alarming speed and unsettling regularity throughout our professional lives.

It's time, therefore, that we acknowledge that the inevitable economical and legislative changes that we'll face will influence our medical careers as much or more as the discovery of new treatments and therapies.

To survive these changes, once we've made sure that the newfangled idea really will help our patients, we must take charge of change - get out in front of it like those geese I was talking about a moment ago - and lead it to its most logical and productive culmination. That's what we're trained to do, it's what most of us want to do, and, when given the freedom to do our jobs, it's what we do very well.

After all, the lead sled dog's view has much to recommend it when compared to what the other dogs have to look at all day long.

In closing, I will remind you that I listed five beatitudes for physicians when I spoke to you last year. This past year has taught me the need to add one more beatitude to this list. It goes like this:

Blessed are the physicians who support their elected representatives and who know their public servants' priorities as they do their own - for they shall be called influential. Thank you. May God bless you! ■

# Committee & Commission Reports

## The Report of the Missouri Physicians Health Committee

The Missouri Physicians Health Committee met on April 2 and September 18, 1993.

The Committee members discussed the feasibility of obtaining additional physician consultants that would be geographically located throughout Missouri. The Medical Director's salary would be adjusted according to the anticipated expenditures for the additional consultants. Monies not utilized for physician services as of December 31 would be returned to the medical director. To avoid additional expenses, a similar fund will be established in 1994.

Recommendation: That MSMA staff begin to search for additional medical consultants for the program.

It was the consensus of the Committee members that relapses of Board mandated clients should be reported to the Board within 7-14 days of the time that the Committee becomes aware of the relapse. Additional information on the participants progress and compliance with treatment recommendations will be provided to the Board as appropriate.

The concept of conducting group meetings in Kansas City for participants in the program less than two years was approved. The goal of these meetings is to provide more support for the new physician and it is anticipated that physicians in the program will facilitate these meetings. A similar group will soon be initiated in St. Louis.

It was the consensus of the Committee members that participants should not work while waiting to be evaluated following initial involvement with the MPH Program or while in primary outpatient treatment.

The Committee members discussed an analysis of the participant fees which reflected there had not been an increase for the past five years.

The Committee members approved an increase in participant fees according to the following schedule:

1. Beginning on the seventh month, all new participants will be responsible for paying monthly administrative fees of $75. This may be increased while they are in the program.
2. Current participants will be notified that, as a result of increased costs, administrative fees will be increased to $65 per month beginning January 1, 1994.
3. Participants in the program beyond five years will continue to be responsible for monthly administrative fees.

As a result of additional sexual misconduct/addiction cases being brought to the attention of the MPH Program, the Committee members again discussed the extent of involvement with these cases. To be responsive to anticipated case referrals, the Committee's involvement will be determined on a case by case basis.

This Committee will co-sponsor a scientific program with the Missouri Psychiatric Association during the MSMA's 136th Annual Convention. The topic for this program will be sexual compulsivity/addiction.

The MPH staff has helped to facilitate the development of hospital policies and procedures dealing with physician impairment at the following hospitals: Barnes, St. Louis; St. John's Mercy Medical Center, St. Louis; Menorah Medical Center, Kansas City; North Kansas City Hospital, North Kansas City; Research Medical Center, Kansas City; Swope Park Rehabilitation, Kansas City; St. Joseph Hospital, Kansas City; Children's Mercy Hospital, Kansas City; St. Mary's Hospital, St. Louis; Baptist Medical Center, Kansas City; University of Missouri - Columbia Resident Staff; Washington University - Aid for Impaired Medical Students Policy.

We appreciate the participation of the following Committee members:
*Thomas R. Anderson, MD, Chairman Jack L. Croughan, MD, Medical Director; Karen Sanders, Program Coordinator; Thomas M. Ahmann, MD; Charlotte M. Balcer, MD; Hugh Bartlett, MD; C. John Ritter, MD; Jo-Ellyn Ryall, MD; Donald McIntosh, MD; Charles H. Sincox, MD*

**Robert A. Morantz, MD, husband of Marsha Murphy (center) the MMPAC Breakfast Speaker. Ms. Murphy is a Democratic U.S. Senatorial Candidate, Jackson County Executive and a Missouri Delegate to the Democratic National Convention. Next to Dr. Morantz, Royal O. Cooper, MSMA Executive Vice President. To the other side of Ms. Murphy, Drs. Beverly Murrell and H. Jerry Murrell, MSMA President.**

## Report of the Committee on Legislative Affairs

The Primary concern of your Committee on Legislative Affairs the past year has been the health care reform proposals that have been and are being considered by the Missouri General Assembly. The scope of these measures should clearly demonstrate to all MSMA members the potential powers of the Missouri Legislature and the vital importance of close Physician/Legislator relationships.

Only two of Missouri's 197 Legislators are physicians. And one of them is retiring after this Session and the other is up for re-election in a tough campaign. There is no way for the rest of the Legislators to know what is best for patients and how medicine views the issues unless enough interested physicians are willing to get involved in the political process.

**Cork Swarens, MSMA Executive Director, gives a legislative update at the Board of Directors' Meeting of the Missouri Academy of Family Physicians.**

Remember, Legislators want to hear from their physician constituents on medical issues. If they don't, it is only natural that they will listen to those people and groups who do contact them. Considering the importance of the health care debate now taking place on the state and federal levels, all physicians must take the time and make the effort to get involved if we are to have an impact on the outcome of future changes.

Your Committee and MSMA staff stand ready to assist you in your efforts to improve your personal or local society involvement. With significant physician participation, meaningful and proper changes can be made in our health care system to insure better access and lower costs. We urge you to do your share.

Most of your committee's efforts during the current Legislative Session have centered around House Bill 1622, which was developed by the Governor and introduced by the Speaker of the House.

HB 1622 is expected to be debated by the Missouri House this week and Delegates to this Convention will be provided an update at the Opening Session of our House of Delegates.

With the emphasis placed on HB 1622, we sometimes overlook the fact that your Committee on Legislative Affairs had reviewed, discussed and made recommendations on many, many other bills before the Legislature that affect your patients and your practice. Staff is currently following, to varying degrees, more than 300 bills. Following is a brief update on some of the more important issues.

Limited licensed professionals are always trying to expand their scopes of practice through legislation rather than education. But, with the reform movement, they have intensified their efforts to provide them with a bigger share of the pie in any new plan. One of our problems is that limited licensed groups usually just seek one favor from Legislators, while we must go back time-after-time.

**"Any Willing Provider" (SB 634)** This bill, introduced at the request of MSMA, was intended to allow any physician who was willing to meet the requirements of a managed care entity to join that entity. The bill was voted "Do Pass" but the Committee added several other professions including chiropractors, nurse anesthetists, social workers, etc. We are currently considering compromise language.

**Optometry (HB 1322)** Would allow optometrists to expand their prescribing authority and, probably, do laser surgery. The bill remains in committee as does its companion bill in the Senate. It's tough...optometrists "know" the political system.

**Lay Midwives (HB 985)** This is the 12th year a bill legalizing the practice of lay midwifery has been introduced and each year it has gained supporters. It has passed the House, been heard by a Senate Committee and is awaiting a committee vote. We are encouraging Senators to substitute a bill encouraging the use of certified nurse midwives as an alternative. The outlook is uncertain.

**Podiatry (HB 1451)** The podiatrists would like to expand their practice from the foot to include the ankle. The bill remains in committee at this time.

**Chiropractic (SB 769)** This is another very politically active group. This bill was voted Do Pass last week by the Senate Public Health Committee and awaits Senate action. Originally, the bill would have denied hospitals the right to keep chiropractors off of medical staffs and allowed them to practice "whatever is taught in a chiropractic school". We were able to amend out the last part in the Senate committee and will oppose the rest as the Session progresses.

**Anti-Trust Exemption (SB 721)** This bill was also introduced at the request of MSMA. The purpose of the bill is to allow the state to take over anti-trust supervision of physician-directed organizations and relax some of the strict regulations that hamper the formation of such organizations. Many opponents appeared against the bill, most fearing favorable treatment for physician groups, and the bill remains in committee.

**Board of Healing Arts** The Association has been involved with several bills dealing with the Board of Healing Arts. These include bills which would permit the Board to enter into consent agreements with physicians, establish a Statute of Limitations on when the Board could bring certain actions and a revision of the collaborative practice statute. At this time, all the bills are moving through the process, but the final out-

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come cannot be predicted.

**Safety Issues** MSMA has provided witnesses to testify in favor of tougher D.W.I. laws, seatbelts in pickup trucks and boat safety improvements. All have been reported out of committee and should be fully debated by the General Assembly. These represent only a few of the bills your Committee has considered. A full report of all the measures will be provided to MSMA members when the General Assembly adjourns on May 13.

*H. Jerry Murrell, MD, Chairman; Carol F. Williams, MD; Melvin C. Kasten, MD; Norman P. Knowlton, III, MD; David Wilkinson, MD; Frederick W. Hahn, MD; Frederick D. Peterson, MD; Thomas Sparkman, MD; Edgar Ailor, MD; David O. Barbe, MD; Steven E. Buie, MD; Jerry Kennett, MD; Robert N. Miller, MD; Daniel O'Sullivan, MD; Mrs. Betty Huffaker; Mrs. Jean Wankum; Mrs. Nona Chapman*

### Report of the Committee on Publications

The ninetieth volume of *Missouri Medicine* contain 14 scientific articles and 29 "Perspectives" articles. The peer-reviewed articles, submitted by Missouri physicians and scientists, covered a wide range of medical subspecialty topics and case reports.

The Perspective pages provided the Journal reader with an even wider range of medical topics, humor, and reports on emerging techniques and technology.

Several series of articles were included, too. The Missouri Department of Health contributed "Chronic Disease Reports" and the Medical Informatics Department at the University of Missouri supplied readers with a continuing series of articles to report on the various ways computers are having an impact on medicine in Missouri. The Dermatology Quiz, a monthly feature that presented different dermatology cases and gave readers an opportunity to diagnose the problem based on a photograph and a minimal patient case history, ended its run in December. This feature has proven to be very popular.

The Publication Committee and Editor, J. Regan Thomas, appreciate the contributions of the members and others who have filled the pages of *Missouri Medicine* with interesting, enjoyable articles. The Committee also appreciates the Association's continued support of the Journal.

*J. Regan Thomas, MD, Chair; Philip C. Anderson, MD; John S. Daniels, MD; John C. Hagan III, MD; Donald G. Sessions, MD*

### Report of the Commission on Continuing Education and Health Manpower

The Commission on Continuing Education and Health Manpower met on June 21, 1993 and January 25, 1994.

The Commission members reviewed a letter from the Committee for Review and Recognition (CRR) and considered the comments and suggestions regarding the MSMA's continued recognition as a sponsor of CME activities for a period of four (4) years. The following actions were instituted:

- The MSMA appeals process was revised to expand the definition of an adverse accreditation decision to include probation, withholding or withdrawal of accreditation.
- The Commission recommended that MSMA obtain a legal review of the "Procedures for Reconsideration of Adverse Decisions of the Continuing Medical Education Committee" to assure due process.
- The CME Annual Reports will be used to monitor sponsors' progress or identify problems. If problem areas are identified, the Committee on Continuing Medical Education will forward a letter of concern to the sponsor.

The Commission members reviewed participant evaluations of the Second Annual Conference on CME that was held at the Marriott's Tan-Tar-A Resort on June 11, 1993. This conference was attended by representatives of institutions and organizations recognized as a sponsor for CME activities as well as those interested in becoming a sponsor for CME. The attendees expressed interest in developing an Alliance for Continuing Medical Education in Missouri. Such an organization would provide sponsors with a formal mechanism to network on a state-wide basis.

Commission members reviewed and approved the CME Mission Statement for the Annual Convention.

Commission members reviewed the process utilized in developing the 135th MSMA Annual Convention. The scientific programs conducted during this Annual Convention were reviewed and it was determined that they were consistent with the Association's CME Mission Statement.

The 136th Annual Convention will be held April 7-10, 1994 at the Westin Crown Center Hotel in Kansas City. To begin the planning process for this Annual Convention, specialty program chairmen were provided with a summary of the partici-

**Philo Su, MD, and Kwei Lee Su, PhD, of Jefferson City performing at the Alliance "In the Spotlight" AMA-ERF Benefit. The benefit raised $5,067 for AMA-ERF.**

pants evaluations to be used in formulating educational offerings based upon member needs and interests. The planning schedule and duties of the specialty program chairmen will be discussed during the commission on Interspecialty Medicine meeting on July 28.

Commission members reviewed the scientific programs that will be held during the 1994 Annual Convention. Considerable time was devoted to ensuring that the programs were based upon education needs and interests of MSMA members. Explicit objectives have been developed for each educational offering.

The scientific programs are designed to encourage MSMA members to attend other specialty programs. The Commission members expressed their concern regarding the registration fees for some of the scientific programs held during the Annual Convention.

The Commission members approved a policy to discourage individual program registration fees so that members are welcome to attend any of the scientific programs.

**Several creative scrub suits were auctioned at the "In the Spotlight" AMA-ERF Benefit. This Presidential suit is being modeled by Allan H. McCown, MD, of St. Louis.**

This policy further stipulated that it will be acknowledged in writing that all physicians attending the MSMA Annual Convention are welcome at any and all sessions and that this be printed in the final program.

We appreciate the participation of the following Commission members: *Michael W. Vannier, MD, Chairman; Michael Bukstein, MD; J. Thomas Critchlow, MD; Gerald J. Duling, MD; George Evans, MD; William H. Goldring, MD; John Kelly, MD; William E. Larsen, MD; David S. Martin, MD; Aly Mohsen, MD; Donald C. Patterson, MD; Kathryn R. Roedel, MD; York E. Silliman, MD; Gregory A. Tobin, MD; George X. Trimble, MD*

## Report of the Committee on Continuing Medical Education

The Committee on Continuing Medical Education met June 21, August 16, December 6, 1993 and January 25, 1994 via phone conference.

The Committee members devoted considerable time and energy in planning the Second Annual Conference on CME which was held at the Marriott's Tan-Tar-A Resort on June 11, 1993. This conference provided the 50 participants with information to deal systematically with the numerous compliance issues and improve their respective programs.

The Committee members reviewed each accredited sponsor's 1993 Annual CME Report summaries to assess compliance with the Essentials. Sponsors will be notified of the Committee's concerns and actions necessary to correct any deficiencies.

The accreditation findings of the CME reviewers are tabulated to assure that the evaluation of institutional compliance with the essentials is consistent with the recommendation for accreditation.

The Committee has received several inquiries regarding the feasibility of accrediting videoconferencing CME activities. The Committee members directed staff to obtain additional information and develop a report for the next meeting.

The Committee members were very supportive of reinstituting the Physician's Recognition Award (PRA) to provide evidence that the annual CME requirement has been satisfactorily met. Allowing physicians to utilize this Award would reduce unnecessary duplication in the reporting of CME activities.

Recommendation: That MSMA discuss with the State Board of Registration for the Healing Arts the feasibility of again permitting Missouri physicians to utilize the PRA to document the CME requirements for relicensure.

The Committee members recommended the following organizations be recognized as an accredited sponsor for CME activities through renewal of their accreditation privileges. The Committee reviewed and approved their applications for renewal based on their demonstrated performance according to the ACCME Essentials and Guidelines.

Baptist Medical Center, *Kansas City*; Buchanan County Medical Society, *St. Joseph;* Cape Girardeau County Area Medical Society, *Cape Girardeau*; Deaconess Hospital, *St. Louis;* DePaul Health Center, *St. Louis;* Doctors Regional Medical Center, *Poplar Bluff;* Golden Valley Memorial Hospital, *Clinton;* John Fitzgibbon Memorial Hospital, *Marshall;* Incarnate Word Hospital, *St. Louis;* Independence Regional Health Center, *Independence;* Lee's Summit Hospital, *Lee's Summit;* Lutheran Medical Center, *St. Louis;* Memorial Community Hospital, *Jefferson City;* North Kansas City Hospital, *North Kansas City;* Parkland Health Center, *Farmington;* Phelps County Regional Medical Center, *Rolla;* St. Anthony's Medical Center, *St. Louis;* St. Joseph Health Center - Hospital West, *St. Charles;* St. Mary's Health Center, *Jefferson City;* Still Regional Medical Center, *Jefferson City;* Western Missouri Mental Health Center, *Kansas City.*

We appreciate the participation of the following Committee members: *Michael W. Vannier, MD, Chairman; Gerald Duling, MD; George A. Evans, MD; Michael R. Freeman, MD; John Kelly, MD; William E. Larsen, MD; David S. Martin, MD; Aly Mohsen, MD; York E. Silliman, MD; George X. Trimble, MD*

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### Report of the Commission on Interspecialty Medicine

The Commission on Interspecialty Medicine met on July 28, 1993 via phone conference.

The MSMA House of Delegates referred the following two resolutions to the Commission for further study: Resolution 1, *Definition of the Practice of Medicine* and Resolution 5, *MSMA Position on a Legal Definition of the Practice of Medicine.*

It was the consensus of the Commission members to study the feasibility of formulating a refined definition of the practice of medicine. Commission members reviewed the Indiana definition of the practice of medicine. Legal counsel has advised MSMA that the current statutes are most appropriate and that refining the definition of the practice of medicine may not withstand legislative intrusion.

Recommendation: That MSMA study the feasibility of refining the definition of the practice of medicine placing controls over managed care and expert witnesses.

The accreditation of MSMA as a provider of continuing medical education activities during the Annual Convention depends upon the total support of each specialty organization. Specialty program chairmen reviewed participant evaluation forms noting specific requests for programs to be presented during the 1994 MSMA Annual Convention. The program chairmen were asked to provide a rationale for the topics selected to demonstrate a linkage between the program content and the member needs.

Commission members discussed the Sanus policy requesting physicians to self-query the National Practitioner Data Bank as a condition to continue their participation in the PPO. It was felt that sufficient information has already been disclosed within the credentialing process. MSMA provided a letter that delineated the conditions under which a report could be obtained by such unauthorized entitles as Sanus.

Recommendation: That MSMA pursue a mechanism that would eliminate future requests of such intrusive information.

We appreciate the participation of the following Commission representatives:

*Stephen McCray, MD, Anesthesiology, Chairman; Tom Anderson, MD, Psychiatry; James Anthony, MD, Radiology; Robert Breckenridge, MD, Pathology; Michael Chehval, MD, Urology; Joseph Corrado, MD, Surgery; William Crowley, MD, Neurology; Jerome Grunt, MD, Pediatrics; David Fleming, MD, Internal Medicine; Tom Highland, MD, Orthopaedics; William Huffaker, MD, Plastic Surgery; Michele Kemp, MD, Allergy; Tom Lieb, MD, Physical Medicine and Rehabilitation; Michael Maves, MD, Otolaryngology; John Oro, MD, Neurosurgery; Dennis Pysczynski, MD, Thoracic; Stephen Slocum, MD, Ophthalmology; William Soper, MD, Family Physicians; Mark Steele, MD, Emergency Physicians; William Stoecker, MD, Dermatology; William Walker, MD, OB/GYN*

**St. Louis physicians - AMA Delegate Robert MacDonald, Jr., MD, AMA Alternate Delegate Jo-Ellyn Ryall, MD, and AMA Delegate George Bohigian at the President's Inauguration Reception.**

### Report Commission on Medical Economics, Third Party Medicine, and Governmental Relations

The Commission considered six resolutions referred by Council from the 1993 MSMA Annual Convention.
*Resolution #9 - MSMA Position on Mental Health Screening Forms for Nursing Home Admission; Resolution #10 - MSMA Position on the Minimum Data Set; Resolution #15 - Medicaid Reimbursement for Office Visits; Resolution #19 - Reciprocal Agreements for Reimbursement for Medical Costs; Resolution #22 - Rural Hospital Exemption form Medicaid Hospital; Resolution #23 - Reimbursement by Hourly Rate*

Additionally, the Commission addressed Blue Cross and Blue Shield of Missouri's plan for a physician profiling performance index and corresponded with them informing them of AMA policy as it relates to evaluation of purely claims based data. The Commission is pursuing the creation of physician guidelines for communicating with patients who have hearing impairments as this communication relates to the Americans with Disabilities Act. Insurance companies UCR downward creep was discussed, specifically letters sent by insurers to patients who are told not to pay any amount above the UCR. If the matter goes to court the insurance company will cover legal fees.
*James Rogers, MD, Chairman; Luis Anglo, MD; Alan Braun, MD; James Conant, MD; Stephen Crespin, MD; Milamari Cunningham, MD; Kenneth Dempsey, MD; Melvin Hayden, MD; George Hruza, MD; Ann Peick, MD; Ronald Riner, MD; Carl Strauss, MD; Randall Treadwell, MD*

### Public Affairs Commission Conference Call - March 22, 1994

Dr. Brennan called the meeting to order. He announced that the conference agenda would be to review the five MSMA/AMA Resolutions referred to the Public Affairs Commission in 1993-94.

**Resolution #39 - Patient's Right to Choose** (AMA amended and adopted as #701 from A-93, 1994 Senate Bill 634) Discussion began with how much the patient has the right the choose his/her own physician, and how the closed panels in effect create a monopoly and is contrary to fair trade in a free enterprise system. It was also questioned if the AMA has the authority to enforce their position on a patient's right to choose. Dr. Brukhardt mentioned that Columbia physicians are interested in their patient's right to choose and that with the advent of HMO's in the Columbia area, the HMO's take this right away. Dr. Brennan agreed this was happening, too, in St. Louis. It was also suggested that HB 1622 will affect the patient's right to choose.

It is recommended that the MSMA establish a public education awareness campaign which incorporates HB 1622 and the Patient's Right To Choose to be targeted to doctor's offices, the media and MSMA members. It was also recommended that through our MSMA publications, staff should inform members about the consequences of HB 1622 and that members should contact their representatives to relay concerns.

**Resolution #28 - Use of Face Shields** (AMA amended and adopted as #401 from A-93) Dr. Brennan explained that MSMA does not have the authority to require children who play base/soft ball to wear these helmets, but that the Consumer Product Safety Commission can set standards as long as we prove there is a risk of injury without such standards. Medicine does not have the ability to say that it can prove legally that there is a risk of injury if children don't wear the face shields with standards outlined by MSMA. Without proof, we do not have a case for the improved face shields. However, we can make recommendations to the CPSC that they study this matter.

It is recommended that after research from the Facial Plastic Surgery Society, if numbers warrant an investigation, that the MSMA request the support of Emergency Medicine, Family Physicians, Pediatrics, and Plastic Surgery to endorse the use of the expanded face shield through letters to be sent to the AMA, the CPSC and trainers and physicians of the base/soft ball teams.

**Resolution #27 - DWI and Lowered Alcohol Content** (Refer to 1993 adopted Senate Bill #167) Legislation in 1994 to lower to .08 MSMA supporting the new bill #1162 Discussion followed on the history of the bill. It was discovered that the Missouri Restaurant Association and Anheuser-Busch are against the bill because diners might assume that they should drink less during dinner so not to reach their .08% limit. It was suggested that MSMA and the Missouri State Highway Patrol together sponsor a program to be presented at the June 4-5 Council meeting at the Lake of the Ozarks. In a controlled environment, the program would ask for Councilor and/or staff volunteers to perform sobriety tests prior to the drinking, consume 1 oz. measured alcoholic beverages, and have a breathalizer test performed on the volunteers on a set schedule. After each .05%, .08, and .10% standards are reached, another set of sobriety tests would be performed to test the limits of alcohol consumption to prove personal limits.

It is recommended that the MSMA sponsor the Sobriety Testing Program with the Missouri Highway Patrol in June, and that in literature and/or legislation positions sent to the media and the public, that MSMA endorse the Designated Driver Program along with other organizations against drunk driving.

**Resolution #21 - Auto Seizure-FYI only** (Encompasses #27) It was mentioned that the Public Affairs Commission was pleased to see MSMA endorse this and also that no action be taken on this resolution because it was referred to the Public Affairs Commission as an For Your Information Only.

**Resolution #7 - Smoke-Free Workplace-FYI only** It is recommended to use this issue in Medical Messages and Shorts and Fillers when discussing topics of smoking of tobacco/cancer.

**MSMA Issue - Pickup and Boat Safety** (New legislation in 1994) House Bill #1252 Discussion followed that we should inform the public and the media that we are in support of this issue, as well as researching the placement of seatbelts in school buses and taxicabs.

It is recommended that MSMA publicly endorse the use of safety belts in all types of vehicles through a public awareness campaign.

**MSMA Issue - 3-Month Stockpile Scrips** Dr. Brennan mentioned that there is a difference between prescribing a 3-month prescription for a rural family and prescribing for stockpilers or for those who are selling the drug illegally. The question of the physician's responsibility for the patient also surfaced. Dr. Brukhardt explained that pressure from a patient where the insurance companies will not pay for the prescriptions unless it is in a 3-month supply also exists. Also, some new medication needs adjustment after initial treatment, what happens in those cases? And, narcotic prescriptions were also in question.

It is recommended that physicians should have the ultimate decision in whether or not the patient receives the 3-month supply. Narcotic prescriptions would be not allowed for this. It was also recommended that in the upcoming editions of *Progress Notes*, mention be made on stockpiling and for physicians to write to share anecdotes on this issue.

After the Resolutions Discussion, the plan for the revitalization of the communications program of MSMA was discussed in summary. Main points were discussed and it was mentioned that Public Affairs Commission should play a major role in framing the future of the Communications Program, along with the other committees and commissions named in the proposal. The members of the commission were excited to hear about the new program.

Dr. Bunge then requested help from the Communications Department in media and public relations.

It is recommended that the Public Affairs Commission participate in the formation of the new Communications Program. It is also recommended that the Communications Department produce a "How-To" Media Kit to be sent to all the Component Societies discussing media and public relations techniques. In order to provide additional administrative services, it is also recommended that the Communications Director hold regional meetings around the state to teach basic public relations skills.

All participating members of the conference mentioned that they would be at the Annual Convention in Kansas City. After thanking Dr. Brennan and Dr. Hayes for their three years of service to the Public Affairs Commission, the conference call was adjourned.

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*Daniel Brennan, MD, Chair, St. Louis; Nancy Bunge, MD, Mexico; Walter Schroeder, MD, Cape Girardeau; Diane Brukardt, MD, Columbia; Ravi Mehra Jr., MD, St. Louis; Kimberly Hayes, MD, Independence.*

### Report of the Council on Ethical and Judicial Affairs

Your Council on Ethical and Judicial Affairs was asked on several occasions to examine and study various component society bylaws regarding any possible conflicts with the MSMA Constitution and Bylaws. Also a question regarding delegates-at-large (medical school deans and MSMA past presidents) voting in the local component society caucuses was referred to us for an interpretation.

Under our Bylaws, Chapter III, Section 1. (f) are provisions for delegates-at-large to the House of Delegates.

"All Past-Presidents of the association, the Speaker and Vice-Speaker, and the deans of each medical school located in Missouri and who are members of the Missouri State Medical Association shall serve as Delegates-at-Large."

Our Bylaws further state in Chapter IV, Section 4:

"Delegates present at the Annual Convention from Councilor Districts whose Councilors' and Vice-Councilors' terms expire shall hold meetings on or before the morning of the last day of the Annual Convention and elect Councilors and Vice-Councilors for their districts for a term of two years. The names of the elected Councilors and Vice-Councilors shall be given on prescribed forms to the Secretary for presentation to the House of Delegates. Each candidate for Councilor or Vice-Councilor must reside or practice in the district for which he is elected."

It was the consensus of our Council that delegates-at-large do not necessarily have the right to vote in local district caucuses.

Over the years, perhaps as a courtesy, most districts have allowed delegates-at-large to attend district caucuses and vote, but the delegates-at-large are designated by the MSMA by virtue of the offices or positions they currently hold or have held in the past and are not elected by their respective component medical societies.

The Association's judicial mechanism is intended to make available a means whereby differences and disagreements in the areas of membership and ethical and professional conduct can be brought to a settlement that is fair to the interests of all parties.

*Thomas J. Cooper, MD; Walter A. German, MD; E. T. Hansbrough, MD; Hugh E. Stephenson, Jr., MD; Ronald A. Youmans, MD*

### Missouri State Medical Association
### Physician Directed Organization Ad Hoc Committee

The MSMA Council created the PDO Committee in August to formulate a statewide plan for a physician organization which would be able to negotiate on behalf of physicians. Since that Council meeting the Committee has met nine times. The PDO Committee has reviewed many written articles which describe innovative solutions. The PDO Committee has heard speakers from Minnesota Medical Society's Clinic Without Walls and Michigan State Medical Society's Physician Organization, and Kansas Medical Society's Medical Services Corporation. The Committee has also reviewed approaches tried in other states which include: Massachusetts, New York, South Carolina, Mississippi, Louisiana, Arkansas, Oklahoma, Nebraska, Iowa, Illinois, Kentucky, and Tennessee. The Committee submitted and received approval for the following at the January 30, 1994 Council meeting:

1. Move that MSMA approve the formation of a medical consulting service and authorize staff to negotiate contracts as indicated in the report of January 15, 1994. Fiscal note $250,000 over two years.
2. Move that MSMA authorize the formation of a statewide network of IPA-HMOs after Executive committee approval.
3. Move that MSMA authorize staff and PDO Committee to conduct exploratory discussions, fact-finding discussions, and begin negotiations with potential partners in an IPA-HMO venture.

Missouri State Medical Services, Inc. (MSMS) has been created as a for profit subsidiary of the MSMA, see number one above. A search for an executive will be followed by beginning business, probably in April, in St. Louis. Additional offices will be added as business expands. Products will include assessments, assistance with management, marketing, personnel, regulations, and group purchasing. Additional recommendations are expected from the Committee by the time of the annual convention and will be included in an additional report.

*Dan O'Sullivan, MD, Chairman; Jeff Copeland, MD; Lent Johnson, MD; Bill Shell, MD; Jerry Kennett, MD; Steve Buie, MD; Bill Dorzab, MD; John Rollo, MD; Duane Hellam, MD; Fred Hahn, MD - Executive Committee representative*

### Report of the Blue Ribbon Committee on Malpractice and Tort Reform

The Committee met on Saturday, October 23, 1993 in Jefferson City, Missouri. The following resolutions were referred to our Committee: Resolution #29 Continue tort Reform and Resolution #30 Principles for Medical Tort Reform. The Council also referred to the Committee its discussions concerning the California Medical Injury Compensation Reform Act of 1975 (MICRA) and model MICRA legislation.

After presentations by an attorney for a professional liability company, a president of a professional liability company and MSMA staff, the Committee held a lengthy discussion on the various aspects of the material referred to it.

The Committee then adopted the following recommendations to the MSMA Council:

"Moved, that the Missouri State Medical Association implement Resolution 29 by contacting the Missouri Trial Attorneys Association in an effort to begin the negotiations process called for in the resolution"

"Moved, that Resolution 30, which calls for qualifications for expert witnesses, become an item for negotiations with the attorneys."

"Moved, that the Missouri State Medical Association begin contacting other organizations throughout Missouri in an effort to begin forming a strong coalition dedicated to securing liability reform in our state."

*George P. Hoech, Jr., Chairman; Sidney G. Christiansen; Curtis D. Burton; Charles C. Norland; John B. Crane; Michael Ditmore; William A. Turner; Michael D. Hoeman; Eugene F. White; Nancy Weber-Bornstein*

# Exhibitors at the 136th MSMA Annual Convention

The American Academy of Ophthalmology and the Missouri Ophthalmological Society, Inc. perform Glaucoma 2001 screenings for convention participants.

Advanced Medical Data Systems, *Kansas City*
American Red Cross Regional Tissue Services, *Springfield*
Benchmark Computer Systems, Inc., *Lenexa, Kansas*
Blue Cross Blue Shield of Kansas City, *Kansas City*
Blue Cross and Blue Shield, *St. Louis*
Correctional Medical Systems, *St. Louis*
Disability Determinations, *Jefferson City*
Encyclopaedia Britannica-North America, *Chicago, Illinois*
Forrest T. Jones & Company, *Kansas City*
GTE Data Services, *Jefferson City*
Health Midwest, *Kansas City*
Healthcare Interchange, Inc., *St. Louis*
Kevin Sink Photography, *Shawnee Mission, Kansas*
Mayer Hoffman McCann, *Kansas City*
Medical Defense Associates, *Springfield*
The Medical Protective Company, *Fort Wayne, Indiana*
Medical Services Corporation, *Shawnee Mission, Kansas*
Medicare/Blue Cross Blue Shield of Kansas, *Topeka, Kansas*
Midwest Organ Bank, Inc., *Westwood, Kansas*
MOMEDICO, *St. Louis*
Moneta Group, *St. Louis*
Doctor's Office Systems, *Columbia*
Office Tech, Inc., *St. Louis*
The P.I.E. Mutual Insurance Co., *Cleveland, Ohio*
Otsuka America Pharmaceuticals, Inc., *Kansas City*
Roche Biomedical Laboratories, *Kansas City*
SmithKline Beecham Pharmaceuticals, *Cordova, Tennssee*
SmithKline Beecham Clinical Laboratories, *St. Louis*
Syntex Labs, Inc., *Jefferson City*

BENCHMARK COMPUTER SYSTEMS INC.
ENCYCLOPAEDIA

# 136th MSMA Annual Convention Registration by District

(Alliance Members: 98. Convention Guests: 210.)

## DISTRICT 1

T. Bryan Bownik, MD, *N. Kansas City*
Sidney G. Christiansen, MD, *St. Joseph*
James F. Conant, MD, *St. Joseph*
Robert Corder, MD, *St. Joseph*
John Corzine, DO, *St. Joseph*
Frank Daley, MD, *Hamilton*
John R. Dixon, MD, *Brookfield*
Gary A. Dyer, MD, *St. Joseph*
Donald A. Fakhoury, MD, *Kansas City*
Don G. Fortin, MD, *Kansas City*
John C. Hagan III, MD, *N. Kansas City*
Patrick B. Harr, MD, *Maryville*
Thomas H. Hendren, MD, *Liberty*
James Kline, MD, *St. Joseph*
Donald E. Kuenzi, MD, *Kansas City*
Aram Lila, MD, *Excelsior Springs*
Stephen McCray, MD, *N. Kansas City*
Scott J. McKnight, MD, *Liberty*
B.A. Moranville II, MD, *St. Joseph*
Raymond D. Mossie, MD, *Gladstone*
Helen Nguyen, MD, *St. Joseph*
Thomas M. Reardon, MD, *Liberty*
Robert O. Schaaf, MD, *St. Joseph*
Charles Siegel, MD, *Gladstone*
Donald E. Sklenar, MD, *St. Joseph*
Weldon L. Sportsman, MD, *Kansas City*
James L. Stewart, MD, *Weatherby Lake*
Frederick E. Thompson, MD, *Liberty*
Benesto Tumanut, MD, *Kansas City*
Stephen Vilmer, MD, *N. Kansas City*
Richard J. Walsh, MD, *St. Joseph*
Stephen Wiles, MD, *Kansas City*

## DISTRICT 2

Sandra J. Ahlum, MD, *Hannibal*
Michael J. Bukstein, MD, *Hannibal*
Vance Dell, MD, *Hannibal*
Stanley G. Hall, MD, *Hannibal*
Stephen E. Halpin, MD, *Hannibal*
Lent C. Johnson, MD, *Hannibal*
Carl R. Kruse, MD, *Palmyra*
Robert Thompson, MD, *Moberly*

## DISTRICT 3

George K. Alexander, MD, *St. Louis*
Charles B. Anderson, MD, *St. Louis*
Luis B. Anglo, MD, *St. Louis*
John T. Anstey, MD, *St. Ann*
Donald E. Arnold, MD, *St. Louis*
Jerome Aronberg, MD, *Clayton*
Craig E. Aubuchon, MD, *St. Louis*
John Bedwinek, MD, *St. Louis*
Charles R. Blackwell, MD, *St. Louis*
George M. Bohigian, MD, *St. Louis*
G. Robert Bowles, MD, *St. Louis*
Richard V. Bradley, MD, *St. Louis*
Robert V. Brennan, MD, *St. Louis*
Kenneth Bruns, MD, *St. Louis*
Edmond B. Cabbabe, MD, *St. Louis*
Christine C. Cernik, MD, *St. Louis*
Charles Cherre, MD, *Chesterfield*
Octavio R. Chirino, MD, *St. Louis*
M. Ishaq Chishti, MD, *St. Louis*
Patrick M. Coyne, MD, *Florissant*
Jack L. Croughan, MD, *St. Louis*
Ralph Dacey, Jr., MD, *St. Louis*
Ananda DeSilva, MD, *Hazelwood*
Jonathon D. Dehner, MD, *St. Louis*
James A. Diestelhorst, MD, *St. Louis*
John E. Eisenbeis, MD, *St. Louis*
Ronald G. Evens, MD, *St. Louis*
Daniel C. Fabito, MD, *St. Louis*
Linda A. Fisher, MD, *St. Louis*
Arthur H. Gale, MD, *St. Louis*
August W. Geise, MD, *Chesterfield*
Gordon Goldman, MD, *St. Louis*
E. Richard Graviss, MD, *St. Louis*
Darrell Griffin, MD, *Farmington*
William H. Huffaker, MD, *Chesterfield*
Donald R. Ingram, MD, *Festus*
Raymond C. Jablonski, MD, *St. Louis*
James J. Jenkins, MD, *St. Louis*
Steven M. Johnson, MD, *St. Louis*
Timothy R. Jones, MD, *St. Louis*
Robert S. Karsh, MD, *St. Louis*
Jack Kayes, MD, *St. Louis*
Allan E. Kolker, MD, *St. Louis*
Bruce A. Kraemer, MD, *St. Louis*
Jerome L. L'Ecuyer, MD, *St. Louis*
John M. Laird, MD, *St. Louis*
William F. Leightner, MD, *St. Louis*
Francis X. Lieb, MD, *Richmond, VA*
Thomas Lieb, MD, *Clayton*
Robert MacDonald Jr., MD, *St. Louis*
Henry H. Macler, Jr., MD, *St. Louis*
Edgardo G. Mayuga, MD, *St. Louis*
J. Alex Marchosky, MD, *Chesterfield*
David S. Martin, MD, *St. Louis*
Allan H. McCown, MD, *St. Louis*
Ravi Mehra, MD, *St. Louis*
Charles W. Miller, MD, *St. Louis*
Robert N. Miller, MD, *St. Louis*
Suzanne L. Miller, MD, *Grover*
Emil F. Miskovsky, MD, *Bridgeton*
Patricia L. Monteleone, MD, *St. Louis*
Arturo Montes, MD, *Florissant*
Harry Moore, Jr., MD, *St. Louis*
K. Lynne Mortiz, MD, *St. Louis*
Alan H. Morris, MD, *St. Louis*
J. Gail Neely, MD, *St. Louis*
Charles C. Norland, MD, *St. Louis*
Edward O'Brien, MD, *St. Louis*
Daniel O'Sullivan, MD, *St. Louis*
Meredith Payne, MD, *Chesterfield*
Carl C. Pearman, MD, *St. Louis*
Frederick Peterson, MD, *St. Louis*
John A. Powell, MD, *St. Louis*
John Purcell, MD, *St. Louis*
Moududur Rahman, MD, *Chesterfield*
David M. Reisler, MD, *Chesterfield*
John L. Rollo, MD, *St. Louis*
Jo-Ellyn M. Ryall, MD, *St. Louis*
Ramulu Samudrala, MD, *St. Louis*
Suseela Samudrala, MD, *St. Louis*
Robert F. Scheible, MD, *St. Louis*
Stephen G. Slocum, MD, *St. Louis*
Kenneth R. Smith Jr., MD, *St. Louis*
Donald G. Spalding, MD, *St. Louis*
John A. Stith, MD, *St. Louis*
Shiraz Sunderji, MD, *St. Louis*
Hiralal Tekwani, MD, *St. Louis*
J. Regan Thomas, MD, *St. Louis*
Randall E. Treadwell, MD, *Alton*
Philip C. Trotta, MD, *St. Louis*
J. Nick Verde, MD, *St. Louis*
Stephen J. Vitale, MD, *St. Louis*
Harvey Walker Jr., MD, *St. Louis*
Martin B. Wax, MD, *St. Louis*
Joseph W. West, MD, *St. Louis*
Stephen A. Wexler, MD, *St. Louis*
Martin B. Wice, MD, *St. Louis*
David L. Wilkinson, MD, *St. Louis*
Carol F. Williams, MD, *St. Louis*
Newton B. White, MD, *St. Louis*
V. Leroy Young, MD, *St. Louis*
Kenneth W. Zehnder, MD, *St. Louis*
Robert E. Ziegler, MD, *St. Louis*
J. Michael Zylka, MD, *St. Louis*

### DISTRICT 4

Jeffrey Copeland, MD, *St. Charles*
Ferdinand Del Pizzo, MD, *St. Charles*
Sammy Farrell, MD, *Washington*
Gerald Fleer, MD, *St. Peters*
Craig S. Holzem, MD, *Washington*
Dennis Keesal, MD, *St. Charles*
Charles H. Sincox, MD, *Washington*

### DISTRICT 5

Rushdy Abadir, MD, *Columbia*
Ed Ailor, MD, *Columbia*
Susan K. Ailor, MD, *Columbia*
William C. Allen, MD, *Columbia*
Jeffrey O. Anglen, MD, *Columbia*
Bradley Arthaud, MD, *Columbia*
Charlotte M. Balcer, MD, *Jefferson City*
Charles Barbee, MD, *Columbia*
Diane Brukardt, MD, *Columbia*
Lester R. Bryant, MD, *Columbia*
Nancy J. Bunge, MD, *Mexico*
George Carr, MD, *Jefferson City*
Jennifer Lik Clark, MD, *Columbia*
Robert R. Conway, MD, *Columbia*
Joseph A. Corrado, MD, *Mexico*
John W. Cowden, MD, *Columbia*
Fred T. Creech, MD, *Columbia*
William J. Crowley Jr., MD, *Columbia*
Tom Critchlow, MD, *Mexico*
Milamari Cunningham, MD, *Columbia*
Maureen Dempsey, MD, *Columbia*
John D. DeSpain, MD, *Columbia*
Jag Devkota, MD, *Columbia*
H. Peter Ekern, MD, *Mexico*
Bernard Ewigman, MD, *Columbia*
Robert Fisher, DO, *Columbia*
Jerry E. Foote, MD, *Columbia*
Roger A. Francis, MD, *Osage Beach*
Steve M. Gnatz, MD, *Columbia*
Glenn Gordon, MD, *Mexico*
William T. Griffin, MD, *Columbia*
Ted D. Groshong, MD, *Columbia*
Victoria Gunn, MD, *Jefferson City*
Marvin T. Haw, MD, *Columbia*
M. R. Pete Hayden, MD, *Camdenton*
Richard A. Heimburger, MD, *Columbia*
Mary Alice Helikson, MD, *Columbia*
Lawrence D. Henry, MD, *Jefferson City*
Derek D. Hughes, MD, *Columbia*
Harold Kanagawa, MD, *Jefferson City*
Jerry Kennett, MD, *Columbia*
William Kimlinger, MD, *Jefferson City*
Dennis R. Knudson, MD, *Columbia*
Debra Koivunen, MD, *Columbia*
Gregg Laiben, MD, *Jefferson City*
Joseph Lamberti, MD, *Columbia*
Leo R. Landhuis, MD, *Columbia*
Hemlata K. Lepkowski, MD, *Columbia*
Matthew T. Lewis, MD, *Jefferson City*
Byron L. Limmer, MD, *Columbia*
John I. Matthews, MD, *Jefferson City*
David K. McLaren, MD, *Columbia*
Randall Meyer, MD, *Jefferson City*
Frank Mitchell, MD, *Columbia*
H. Jerry Murrell, MD, *Columbia*
W. Kirt Nichols, MD, *Columbia*
David Ota, MD, *Columbia*
David Payne, MD, *Columbia*
Michael C. Perry, MD, *Columbia*
Carl A. Petit, MD, *Osage Beach*
Stephen Phillips, MD, *Columbia*
Kenneth Rall, MD, *Independence*
Dorothy L. Rodgers, MD, *Columbia*
James A. Roller, MD, *Columbia*
Donald Silver, MD, *Columbia*
Amolak Singh, MD, *Columbia*
Chris Southwick, MD, *Columbia*
Hugh Stephenson, Jr., MD, *Columbia*
Ronald W. Swinfard, MD, *Columbia*
Michael J. Szewszyk, MD, *Columbia*
Steven J. Taylor, MD, *Mexico*
Jerry Templer, MD, *Columbia*
Horace E. Thomas, MD, *Columbia*
Robert M. Thomas, MD, *Columbia*
Robert P. Wankum, MD, *Jefferson City*
Bruce Weaver, DO, *Columbia*
Joseph A. Werth, MD, *Jefferson City*
Susan M. Zurowski, MD, *Columbia*

### DISTRICT 6

Tom Batty, MD, *Eldorado Springs*
A. J. Campbell, MD, *Sedalia*
Melanie Elfrink, MD, *Marshall*
Phillip M. Hornbostel, MD, *Sedalia*
Edward S. Jones, MD, *Overland Park, Ks*
Bedford F. Knipschild, MD, *Marshall*
William C. LaHue, MD, *Lexington*
Gerald B Lee, MD, *Kansas City*
Warren C. Lovinger, MD, *Nevada*
Robert Magee, MD, *Eldorado Springs*
Jerry Meyer, MD, *Concordia*
Ted Moore, MD, *Nevada*
Robert Pavlu, MD, *Carrollton*
Charles T. Riley, MD, *Richmond*
William A. Turner, MD, *Nevada*
C. Rob Wetzel, MD, *Clinton*

### DISTRICT 7

Melvin Abend, MD, *Kansas City*
Arthur Adelman, MD, *Shawnee Mission, KS*
Marvin R. Alberg, MD, *Kansas City*
Thomas P. Allen, MD, *Kansas City*
Bailey Andrus, MD, *Leawood, KS*
Jim Anthony, MD, *Stilwell, KS*
Ali A. Arbab, MD, *Kansas City*
Jennifer D. Ashby, MD, *N. Kansas City*
Rolfe A. Becker, MD, *Kansas City*
Steven H. Behrends, MD, *Kansas City*
Geoffrey L. Blatt, MD, *Kansas City*
Steven K. Bowlin, MD, *Kansas City*
William D. Bradshaw, MD, *Kansas City*
Robert Breckenridge, MD, *Kansas City*
Barbara N. Buchanan, MD, *Kansas City*
Kenneth Buchwack, MD, *Independence*
Harold A. Budke, MD, *Kansas City*
Steven Buie, MD, *Lee's Summit*
Richard E. Butin, MD, *Kansas City*
William F. Case, MD, *Kansas City*
Siroth Charnond, MD, *Kansas City*
Sanford F. Cockerell, MD, *Independence*
George A. Colom, MD, *Kansas City*
W. Edwin Conner, MD, *Kansas City*
Larry D. Cordell, MD, *Kansas City*
Terry Curran, MD, *Kansas City*
Doug Dehning, MD, *Lees' Summit*
Frederick G. DeFeo, MD, *Kansas City*
G. David Dixon, MD, *Kansas City*
Luke J. Dlabal Jr., MD, *Independence*
Linda Dorzab, MD, *Overland Park, KS*
William Dorzab, MD, *Kansas City*
Roy F. Drake, MD, *Mission, KS*
Joseph Duerksen, MD, *Shawnee Mission*
Daniel Durrie, MD, *Kansas City*
Jean H. Ellis, MD, *Blue Springs*
Lawrence L. Evans, MD, *Kansas City*
Robert Gibbons, MD, *Overland Park, KS*
Stanley L. Goldman, MD, *Mission KS*
Mario J. Guastello, MD, *Kansas City*
E. Philip Gutek, MD, *Kansas City*
Richard Gutknecht, MD, *Independence*
Douglas W. Hagen, MD, *Kansas City*
Frederick Hahn, MD, *Independence*
J. Max Haight, MD, *Kansas City*
John C. Hall, MD, *Kansas City*
Robert Hazen, MD, *Prairie Village, KS*
Thomas S. Helling, MD, *Kansas City*
John D. Hubbard, MD, *Smithville*
Lawrence L. Hyde, MD, *Kansas City*
G. Keith Jantz, MD, *Kansas City*
Gale O. Jones, MD, *Kansas City*
Marvin Kahn, MD, *Kansas City*
Pierre Keitges, MD, *Overland Park, KS*
Charles R. Kelly, MD, *Kansas City*
Forrest Kendall, Jr., MD, *Kansas City*
Paul G. Koontz, MD, *Kansas City*
Gregg R. Laiben, MD, *Kansas City*
Angelo Lapi, MD, *Shawnee Mission, KS*
Charles Lederer, Jr., MD, *Kansas City*
Bruce Lerner, MD, *Prairie Village, KS*
Joseph M. Lichtor, MD, *Kansas City*
R. Stacy Long, MD, *Kansas City*
Roberto Lopez-Plata, MD, *Kansas City*
William Mangum, MD, *Independence*
Garrett L. Marr, MD, *Kansas City*
Violet B. Matovich, MD, *Kansas City*
Camille S. Matta, MD, *Kansas City*
Andrew McCanse, MD, *Kansas City*
Ross Melgaard, MD, *Leawood, KS*
B. J. Melia, MD, *Kansas City*
John D. Mitchell, MD, *Kansas City*
Samuel Montello, MD, *Prairie Village, KS*
Robert A. Morantz, MD, *Kansas City*
David B. Morgan, MD, *Kansas City*

J. H. Morris, MD, *Independence*
Robert R. Morrison, MD, *Kansas City*
Stuart Munro, MD, *Kansas City*
Carl M. Myers, MD, *Platte City*
Richard E. Nelson, MD, *Kansas City*
James F. O'Malley, MD, *Leawood, Ks*
Gale B. Oleson, MD, *Blue Springs*
Allen G. Parelman, MD, *Kansas City*
Craig Parker, MD, *Overland Park, KS*
Larry W. Piebenga, MD, *Kansas City*
Kenneth C. Place, MD, *Kansas City*
Sharon Prohaska, MD, *Kansas City*
Dennis Pyszczynski, MD, *Kansas City*
Arturo G. Quiason, MD, *Independence*
Emmeline Quiason, MD, *Independence*
Luz S. Racela, MD, *Kansas City*
Philip D. Reister, MD, *Kansas City*
Fred F. Roberts, MD, *Kansas City*
Wade V. Robinett, MD, *Kansas City*
Larry A. Rues, MD, *Kansas City*
Felix N. Sabates, MD, *Kansas City*
Nelson R. Sabates, MD, *Kansas City*
Gordon C. Sauer, MD, *Kansas City*
Gene A. Schillie, MD, *Kansas City*
G. W. Schottman, MD, *Shawnee Mission*
Glenn Shopper, MD, *Overland Park, KS*
Carl D. Siegel, MD, *Kansas City*
Sanford Simon, MD, *Kansas City*
William D. Soper, MD, *Liberty*
Wilber Spalding, Jr., MD, *Kansas City*
Gerald E. Staab, MD, *Kansas City*
John H. Stanley, MD, *Kansas City*
Jack Stelmach, MD, *Kansas City*
Michael Stiles, MD, *Leawood, KS*
G. Donald Stillie, DO, *Kansas City*
Carl F. Strauss, MD, *Kansas City*
Marc K. Taormina, MD, *Independence*
Nalini Tella, MD, *Kansas City*
Harvey Thalblaum, MD, *Kansas City*
Melvin R. Troeh, MD, *Independence*
Barnard Trowbridge, MD, *Prairie Village*
Charles Van Way III, MD, *Kansas City*
Charles Venneman II, MD, *Kansas City*
Harry Wall, MD, *Shawnee Mission, KS*
Charles B. Wheeler, MD, *Kansas City*
Marc M. Whitacre, MD, *Kansas City*
Daniel S. Whitman, MD, *Kansas City*
Stephen Wiles, MD, *Kansas City*
W. Joel Wurster, MD, *Kansas City*
Jay H. Yedlin, MD, *Prairie Village, KS*
Donald Youll, MD, *Overland Park, KS*
Ronald A. Youmans, MD, *Kansas City*
Mark E. Young, MD, *Kansas City*

### DISTRICT 8

Saad Al-Shathir, MD, *Joplin*
Jerrell L. Borup, MD, *Springfield*
Lanny R. Brent, MD, *Springfield*
William J. Brian, MD, *Springfield*
Jordan W. Burkey, MD, *Springfield*
Roger K. Cady, MD, *Springfield*
Michael J. Clarke, MD, *Springfield*
Robert L. Coscia, MD, *Springfield*
Karel A. DeLeeuw, MD, *Springfield*
Darrel D. Domann, MD, *Springfield*
Charles H'Doubler, MD, *Springfield*
Walter A. German, MD, *Springfield*
David W. Hall, MD, *Rogersville*
Duane Hellam, MD, *Springfield*
Michael D. Hoeman, MD, *Springfield*
Bill G. Horton, MD, *Springfield*
Douglas A. Huewe, MD, *Springfield*
Jeffrey T. Jones, MD, *Joplin*
Norman Knowlton III, MD, *Springfield*
Keith A. LaFerriere, MD, *Springfield*
Ben A. Lampert, MD, *Springfield*
Hal Lurie, MD, *Springfield*
T. M. Macdonnell, MD, *Marshfield*
Clarence A. Martin, MD, *Joplin*
Marc D. McCorcle, MD, *Springfield*
Wayne B. Miles, MD, *Springfield*
DeArmond Moore, MD, *Springfield*
Thomas B. Moore, MD, *Joplin*
Gene Morrow, MD, *Springfield*
Teresa A. Olsen, MD, *Springfield*
Lisa Ovens, MD, *Springfield*
Stanley S. Peterson, MD, *Springfield*
L. Kenneth Pottenger, MD, *Joplin*
I. Joe Pryor, MD, *Joplin*
Arteso C. Raborar, MD, *Springfield*
Stephen M. Reeder, MD, *Springfield*
Howard H. Roberts, MD, *Joplin*
Duane W. Sherrod, MD, *Joplin*
Harry D. Silsby, MD, *Springfield*
David L. Spalding, MD, *Springfield*
G. Wayne Stine, MD, *Springfield*
Thomas L. Tombridge, MD, *Springfield*
Ronald M. Wachter, MD, *Springfield*
Norman R. Wall, MD, *Springfield*
Roy E. Wilson, MD, *Springfield*
Arlen D. Winsky, MD, *Springfield*
James B. Wolfe, MD, *Springfield*
Wilfred E. Wooldridge, MD, *Springfield*
Robert L. Zahn, MD, *Springfield*

### DISTRICT 9

David Barbe, MD, *Mountain Grove*
Edward R. Jenkins, MD, *Waynesville*
Laureano Mayuga, MD, *Cabool*
Nalini A. Reddy, MD, *West Plains*
C. F. Smith, MD, *Willow Springs*
E. A. Stricker, MD, *Rolla*
Mark L. Vandewalker, MD, *Rolla*
Joe A. Wall, MD, *Houston*
Shaw P. Wan, MD, *Rolla*

### DISTRICT 10

J. David Auner, MD, *Ironton*
Jean A. Chapman, MD, *Cape Girardeau*
Theodore J. Glenn, MD, *Cape Girardeau*
S. Kent Griffith, MD, *Cape Girardeau*
E. T. Hansbrough, MD, *Poplar Bluff*
Bill Haynie, MD, *Butler*
Kenneth J. Dempsey, MD, *Sikeston*
Christopher Jung, MD, *Cape Girardeau*
J. Marshall Jung, MD, *Cape Girardeau*
Mark C. Kasten, MD, *Cape Girardeau*
Melvin C. Kasten, MD, *Cape Girardeau*
Gene H. Leroux, MD, *Doniphan*
Edwin J. Masters, MD, *Cape Girardeau*
Jon Parks, MD, *Poplar Bluff*
Ann C. Peick, MD, *Poplar Bluff*
Scot G. Pringle, MD, *Cape Girardeau*
Nicholas F. Robinson, MD, *Kennett*
Walt A. Schroeder, MD, *Cape Girardeau*
Alfred D. Shaplin, MD, *Ballwin*
William C. Shell, MD, *Sikeston*
Thomas Sparkman, MD, *Cape Girardeau*
Gregory A. Tobin, MD, *Cape Girardeau*
Fred H. Thornton, MD, *Sikeston*
Kirby L. Turner, MD, *Poplar Bluff*
Michael Wulfers, MD, *Cape Girardeau*

### MEMBERS-AT-LARGE

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David Clifford, MD, *St. Louis*
Donald E. Cole, MD, *Kansas City*
Jerry W. Cook, MD, *Kansas City*
Ann Gettel, MD, *Overland Park, KS*
Dwight Look, MD, *St. Louis*
J. Chris Perryman, MD, *Kansas City*
John Iacobucci, MD, *St. Louis*
Jay M. Portnoy, MD, *Kansas City*
William Selezinka, MD, *St. Louis*

### RESIDENTS

William G. Crane, DO, *Lenexa, KS*
Rachel L. Dotson, MD, *Columbia*
Steven T. Fogel, MD, *Leawood, KS*
Orlando Galindez, MD, *Kansas City*
David Gaston, MD, *Columbia*
Mark R. Jaffe, MD, *Kansas City*
Pierre G. Mardelli, MD, *Mission, KS*
Candice A. Moore, MD, *Nevada*
Steven E. Musick, MD, *Columbia*
Cielo Navato-Dehning, MD, *Lee's Summit*
Abraham Poulose, MD, *Mission, KS*
Colleen Reisz, MD, *Kansas City*
Robert Swanson, MD, *Ballwin*
Sarah Vogel, MD, *Columbia*
Timothy A. Walline, MD, *Kansas City*
Thomas J. Whittaker, MD, *Kansas City*

### STUDENTS

Craig Carmichael, *St. Louis*
Chris Hinrichs, *Kansas City*
Samuel Hughes, *Columbia*
Dawn Olson Kleindorfer, *St. Louis*
Bob Puchalski, *St. Louis*
Julie Miller, *St. Louis*
Mary L. Vest, *St. Louis*
Sarah Vogel, *Columbia*
Cami Watkins, *Kansas City*
Amy Weed, *St. Louis*

# Summary of Council Minutes 1993-94

## Meeting of April 4, 1993
*Lake of the Ozarks*

Fred Hahn, MD, Kansas City, was elected Chairman of the Council and became the Presiding Officer.

Fred Peterson, MD, St. Louis, was elected Council Vice Chairman; Norman P. Knowlton III, MD, Springfield, reelected as Secretary and David Wilkinson, MD, St. Louis, reelected as Treasurer.

## Meeting of June 6, 1993
*Lake of the Ozarks*

Members of the MSMA Council voted to conduct research on the Arkansas Medical Society lawsuit which guarantees access for women and children to Medicaid for possible application in Missouri.

The Council referred the issue of collective bargaining to the Executive Committee, and to have the Joint Committee to the Board of Healing Arts relay MSMA's concerns regarding the problem that new physicians are having in gaining licensing in the state. The Council also referred the issue of postoperative care to the Executive Committee.

A recommendation to convey to the Hospital Association MSMA's position on venue for malpractice trials was approved.

The Executive Committee recommended Dr. Mila Cunningham to the AMA Women in Medicine Advisory Panel; Dr. James Knight as Minority Liaison Member to work with AMA's Advisory Committee on Minority Physicians; and to refer Dr. Gordon Goldman's resolutions to the Council for discussion.

The Council recommended Dr. Robert Gibbons for the AMA Delegate; Dr. Philip Anderson as associate editor of *Missouri Medicine;* and the members of the Publications Committee. It voted to appoint Pat Mills to replace Royal Cooper on the PRO Committee. An Ad Hoc Committee to study the legalization of marijuana for medical purposes was formed.

Reports were heard from the Executive Vice President, Actions and Recommendations from 135th MSMA Annual Convention, Committee to Preserve Health Care, MSMA Auxiliary, Continuing Medical Education Seminar, Membership Information, Medical Practice Research Center, Legislative Affairs, Physicians Health, PRO and MOMEDICO.

## Meeting of August 22, 1993
*Jefferson City*

The MSMA Council directed the Hospital Medical Staff Section to investigate, prepare and report proposals on how physicians should deal with self-query requests from hospitals, third-party payors and others.

The findings from the first report from the Medical Practice Research Center on Cesarean sections were sent to the national and state level OB/GYN societies, the Academy of Family Physicians, and OB/GYN departments in Missouri hospitals and medical schools.

The Council voted to forward two resolutions to the AMA regarding Fiscal Notes on Substitute Resolutions and Due Process in Managed Care Contracts.

A subcommittee to study and formulate a statewide physician-directed organization for networks was formed.

Nominations for the Missouri Patient Care Review Foundation Board were made.

Members for the Blue Ribbon Committee on Tort Reform, Young Physicians Committee and the Commission on Arrangements for 1994 Annual Session were announced.

The nomination of Hugh Stephenson, M.D., for reelection to AMA Council on Medical Education was approved.

The Council heard and accepted reports from the Executive Vice President, Executive Committee, Physicians Health Committee, MSMA Alliance, Missouri Patient Care Review Foundation, Committee on Legislative Affairs; Missouri State Medical Foundation, Missouri Medical Political Action Committee, MOMEDICO, Commission on Interspecialty Medicine, Commission on Continuing Education and Health Manpower, Commission on Medical Economics, Third Party Medicine and Governmental Relations, Membership Information, and the State Board of Registration for the Healing Arts.

## Meeting of December 12, 1993
*Columbia*

The Physician-Directed Organization Committee, which was formed at the August Council meeting to study the possible formation of a statewide physician-directed organization, presented its report.

The recommendations made by the PDO committee

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were to create a Medical Consulting Service, as a for-profit subsidiary under the MSMA to provide services for all physicians in the state, with MSMA members receiving discounts, and to create a Management Service Organization as a separate entity outside the MSMA which would make available a Clinic Without Walls framework.

The committee replied at the January 29-30 Council meeting with specific suggestions for implementing their recommendations. Along with determining what products a Management Service Organization should offer, the committee proposed a specific budget for implementing its group purchasing function.

The Council adopted the 1994 $1.77 million budget as presented by the Budget and Finance Committee.

Because of the number of physicians in northeast Missouri, it was asked that the Council approve a merger between Pike County Medical Society and the Northeast Medical Society, contingent upon the approval of the component societies.

District #3 proposed sending information regarding self-query reports to hospital chiefs of staff to circumvent problems with the National Practitioner Data Bank and hospital staff appointments. The Council voted to disseminate the information in *Progress Notes*, and in *Missouri Medicine*. The information was sent to component societies. It was suggested by the Council to find out about JCAHO minimum requirements. District #3 proposed that the Executive Committee study the change of the date of plan year of the employee's pension trust, with a fiscal note submitted. This recommendation was reported at the January 29-30 meeting of the Council.

The Councilors voted to contact the Department of Insurance regarding complaints dealing with balance billing. For the sake of expediency, the chairman of the Commission on Medical Economics, Third Party Medicine and Governmental Relations signed the letter to be sent to the Department.

A motion passed to distribute information on confidentiality of patient records. MSMA staff will contact the Department of Insurance and request a legal opinion on the subject.

It was brought to the attention of the Council that the renewal license application from the State Board of Registration for the Healing Arts showed discrepancies and inconsistencies throughout the questionnaire. The Council requested the Liaison Committee study the renewal license application.

A committee was formed to study the honoraria amounts presented to speakers for scientific programs at the MSMA Annual Session. A report was presented at the January 29-30 meeting.

The Council directed staff to contact CPHC to gather information on the medical malpractice closed claims report and, if appropriate, respond to press releases of the Department of Insurance.

The Council approved the reappointment of J. Regan Thomas, MD, St. Louis, to serve as editor of Missouri Medicine.

The MPCRF Peer Review Organization Board received two nominations to fill vacancies.

Representative Thomas Macdonnell, MD, Marshfield, was nominated to receive the Citizenship and Community Service Award to be presented at the MSMA 1994 Annual Session, April 7-10.

The Council approved reports from the Executive Vice President, MSMA President, MSMA Alliance, MOMEDICO, Commission on Medical Economics, Third Party Medicine and Governmental Relations, Legislative Affairs, Key Contacts and PIP, Physicians Health Committee, Continuing Medical Education, Committee to Preserve Health Care, Blue Ribbon Committee on Malpractice and Tort Reform, Missouri Health Care Forum, Missouri Patient Care Review Foundation and Membership.

## Meeting of January 30, 1994

*Jefferson City*

The MSMA Council voted to approve of the physician-directed organization as presented by the PDO Ad Hoc Committee.

After a budget and fiscal note of $250,000 was presented, the Council was asked to approve the formation of a medical consulting service and authorize staff to negotiate contracts. The Council also voted that MSMA authorize the formation of a statewide network of IPA-HMO's after Executive Committee approval, and that MSMA authorize staff and PDO Committee to conduct exploratory and fact-finding discussions and begin negotiations with potential partners in an IPA-HMO venture.

The Council voted to nominate Patrick Tong, MD, St. Louis, for the resident slot on the AMA Council on Scientific Affairs. 1993 Legislative Awards nominees were Senator Sid Johnson, St. Joseph; and Representatives W.T. Dawson, Independence; Gary Witt, Platte City; and Pat Kelley, Raytown.

For future medical research projects, the Council directed staff to gather information to investigate other sources, both private and state, for additional funding for the Medical Practice Research Center.

The findings from the report on Honoraria for Scientific Presentations at MSMA Annual Conventions were referred to the Budget and Finance Committee and to the Commission on Continuing Medical Education.

In an effort to protect Missouri physicians, the Executive Committee began to review proposals to provide an insurance program to offer legal assistance for physicians facing charges from regulatory boards or agencies.

# Transpetrosal Approach to Meningiomas of the Medial Temporal Bone

John Oro, MD, and Scott Estrem, MD

**The combination of neurosurgical and otological skull base techniques has allowed new avenues to the resection of tumors of the medial petrous bone. Three cases are presented illustrating the surgical options available.**

Meningiomas of the medial temporal bone often affect vital cranial nerves, vessels, and brain structures. Although benign, their deep location in a complex area (Fig. 1) has precluded surgical excision until recent years, during which the combination of neurosurgical and otolaryngologic techniques have lessend morbidity and mortality. The authors present three cases illustrating the transpetrosal approach and its extensions.

## CASE #1

This 41-year-old woman presented to the University Hospital with a one year history of left-sided trigeminal neuralgia refractory to treatment with Tegretol. She also noted intermittent visual blurring. Examination revealed decreased sensation in the lower half of the left face and decreased left corneal reflex. An MRI scan revealed a 2 cm tumor in the left petrous apex (Fig. 2). A retrolabyrinthine transpetrosal craniectomy was performed and the tumor was excised. Pathology revealed meningioma. Post-operatively there was mild facial weakness which resolved by discharge 10 days later. A follow-up CT showed complete resection (Fig. 3). However, one year later she developed a recurrence in the temporal area in the region of Meckels cave. This small recurrence is currently stable following radiosurgery.

## CASE #2

This 69-year-old man was diagnosed in 1982 as having what was believed to be a vestibular schwannoma. He presented in October 1989 to the Harry S Truman Veterans Administration Hospital with a 6 month history of progressive headache. Neurologic examination revealed decreased sensation in the left face. A CT scan revealed a 3.2 cm tumor involving the medial petrous bone inferior to the tentorium (Fig. 4). A retrolabyrinthine suboccipital craniotomy was performed and the tumor was completely resected (Fig. 5). Pathology revealed meningioma. Post-operatively facial sensation was improved. Follow-up scan 2 years later shows no recurrence.

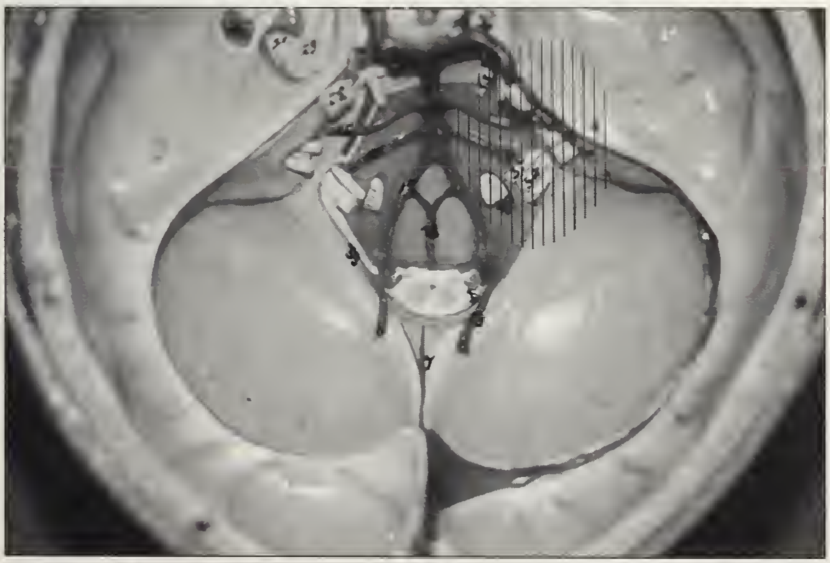

Figure 1 - Medial temporal skull base showing cranial nerves 3-11 and arterial branches from basilar artery.

## CASE #3

This 57-year-old, right-handed woman developed tinnitus and falling spells in 1983. A CT scan revealed a medial petrous bone tumor which was thought to be unresectable. Over the ensuing years she developed increased ataxia, hearing loss on the right, pain in the distribution of the 5th cranial nerve, slurred speech, dysphasia, dull right sided head pain, and double vision. A repeat CT scan showed a 5 cm. tumor causing increased compression of the temporal lobe, brain stem, and cerebellum (Fig. 6).

In March, 1990 the initial stage of an extended transpetrosal approach was performed at the University Hospital. A translabyrinthine-subtemporal-suboccipital craniotomy was performed but the dura was not opened. One week later the wound

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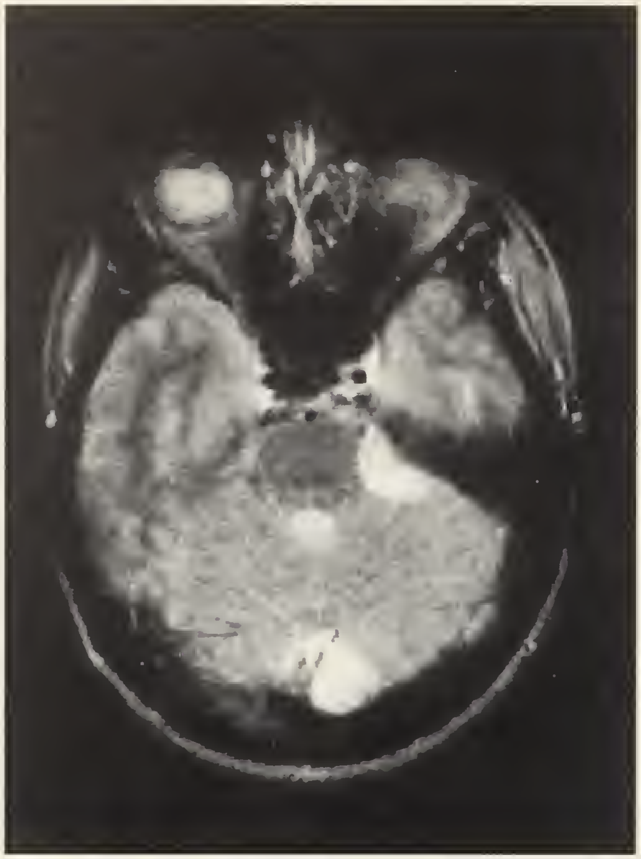

Figure 2 - MRI showing well marginated tumor growing from apex of left petrous bone.

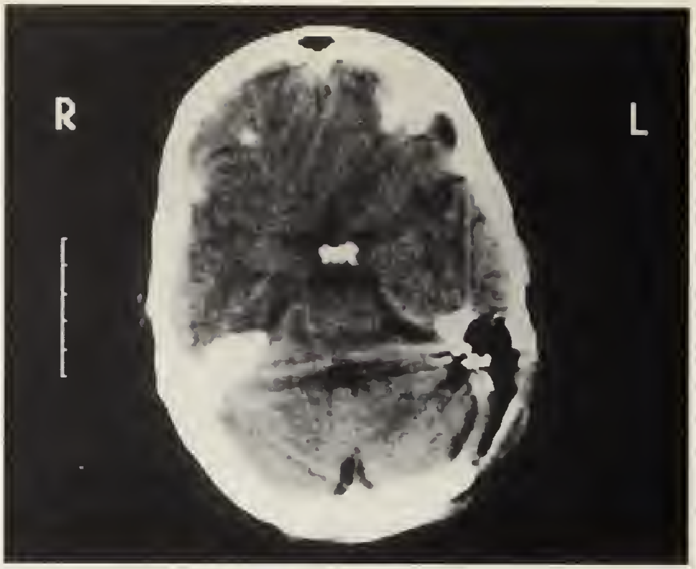

Figure 3 - Post-operative scan of patient in Figure 2.

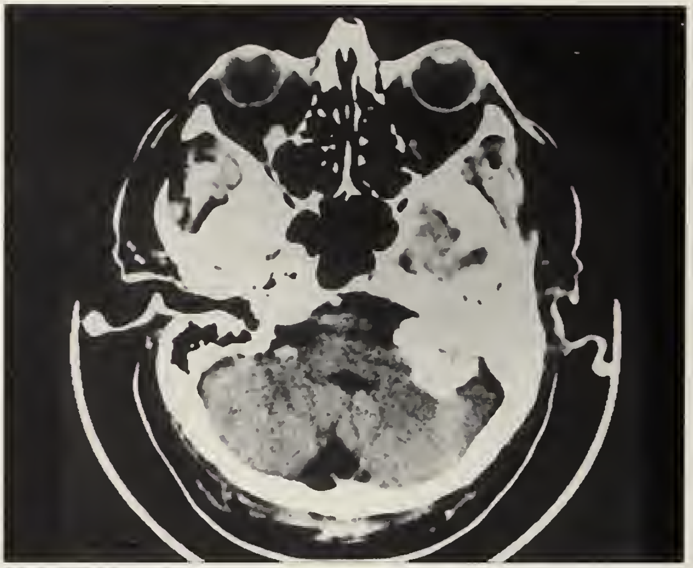

Figure 4 - CT scan showing irregular tumor growing along medial petrous bone.

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was reopened and a transpetrosal dural incision was created and extended into the temporal and suboccipital dura. The tumor was identified and, with the aid of the surgical microscope and the ultrasonic aspirator, was completely resected (Fig. 7). The seventh cranial nerve was found within the tumor and preserved anatomically. Pathologic analysis revealed a syncytial meningioma. Postoperatively she noted double vision and facial weakness. Both have improved and she has returned to work as a secretary. Follow-up at three years shows no evidence of recurrence.

## DISCUSSION

The medial portion of the temporal bone is bound by temporal lobe superiorly, brainstem medially, and cerebellum posteriorly. The temporal and posterior fossa dural compartments are separated by the tentorium which attaches to the dura at the apex of the temporal bone.

Meningiomas of the medial temporal bone may grow into one or both compartments and compress the temporal lobe, brain stem, and cerebellum. Cranial nerves, particularly the 3rd through the 8th, and cerebral arteries, particularly the anterior inferior cerebellar artery, are often involved. Since these tumors are benign and slowly growing, they can reach large size before diagnosis. Their deep location, relation to important neural structures and vessels, and often large size have made resection difficult. Prior to 1970 a surgical mortality of over 50% was expected and many surgeons considered these lesions inoperable. In recent years the combination of skills from various specialties have allowed the development of combined surgical techniques that allow greater exposure to the skull base thus significantly improving outcome.

At the University of Missouri in Columbia, the Divisions of Neurosurgery and Otolaryngology, over the past 5 years, have combined their skills in the resection of skull base tumors. Of 75 skull base lesions, three have been in the medial petrous bone. All three were removed using the "transpetrosal" approach.[1-4] A retrolabyrinthine

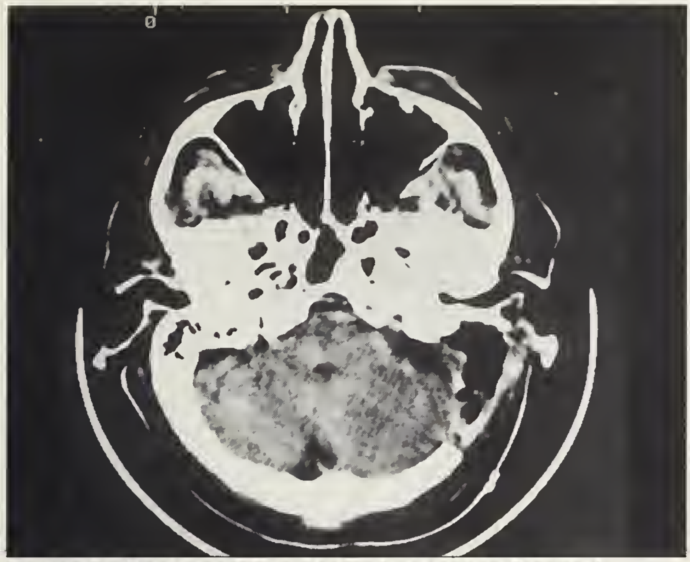

Figure 5 - Post-operative scan of patient in Figure 4.

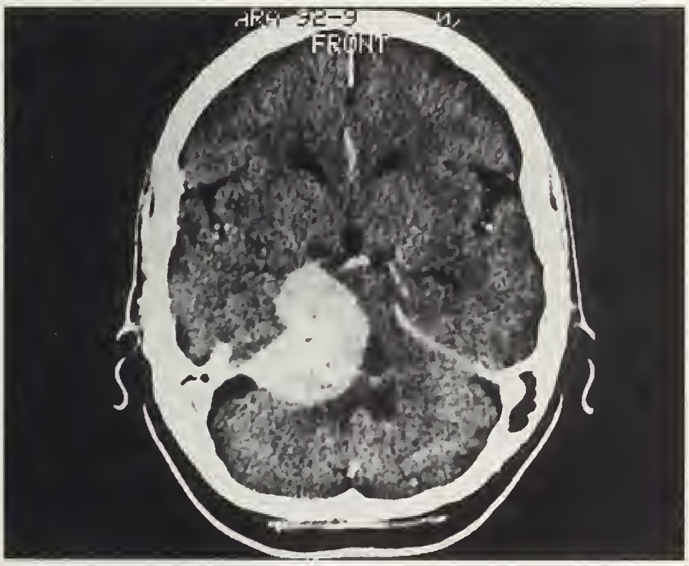

Figure 6 - CT scan showing large medial petrous bone tumor.

or translabyrinthine resection of the temporal bone performed by the otologist exposes the petrosal sinus contained in the dura at the junction of the tentorium to the suboccipital and temporal dura. Section of the petrosal sinus and its attached dura allows opening into both temporal and suboccipital compartments. The sinus must be sectioned lateral to the vein of Labbe, in order to avoid venous infarction of the temporal lobe.

The surgical pathway created is anterior to the transverse and sigmoid sinuses. Previous techniques required section of the sigmoid or transverse sinuses. The "transpetrosal" approach can be used by itself for small tumors (case #1) or combined with a standard suboccipital exposure as in case #2 or with a suboccipital and temporal exposure as in case #3 depending on the degree of tumor extension in these compartments.

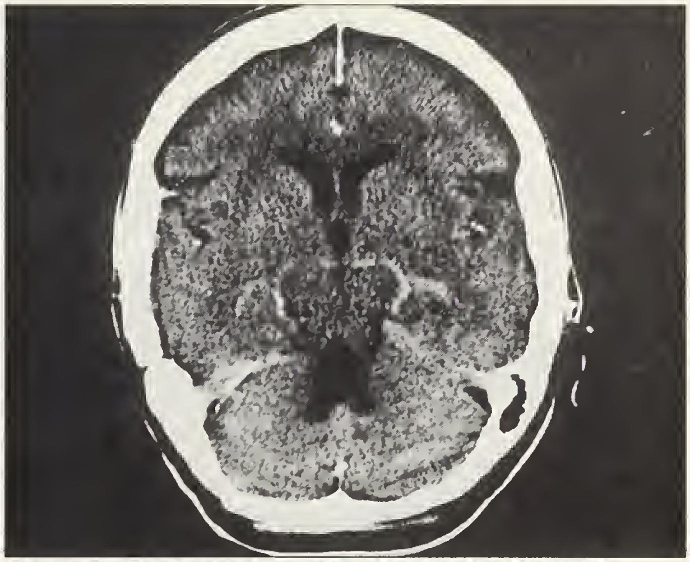

Figure 7 - Post-operative scan of patient in Figure 6.

The combined surgical techniques of both specialties have reduced the morbidity and mortality of resection of these tumors. Further experience should allow continued decrease.

Radiosurgery was used to control tumor recurrence in case #1. This new therapy, consisting of a linear accelerator combined with a stereotactic device, delivers a high dose of radiation to intracranial lesions, sparing normal tissues. Treatment time is typically brief, and usually requires only a single session and an overnight stay in the hospital. Radiosurgery can be used to treat patients with certain types of arteriovenous malformations and brain tumors. The risk of radiation injury is less than 3%. It is likely that with increased experience radiosurgery will play a greater role in the management of tumors of the skull base.

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## The Authors

Dr. Oro is an associate professor in the Department of Surgery (Neurological) and Dr. Estrem is an associate professor in the Department of Surgery (Otolaryngology) at the University of Missouri-Columbia.

**Reprint requests to John Oro, MD, Department of Surgery, University of Missouri Health Sciences Center, Columbia, Missouri 65212.**

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## University of Missouri - Columbia

**Philip C. Anderson, MD,** director of dermatology, received an American Academy of Dermatology Community Service Award for his efforts in planning the 1993 National Melanoma/Skin Cancer Detection and Prevention Month. He also was recognized by the ADD for his three years of service on the Council of Long-Range Planning.

**Noel W. Lawson, MD,** professor of anesthesiology, recently was elected chairman of the board of trustees of the International Anesthesia Research Society. Dr. Lawson has been a member of the board for nine years and served as the program chairman for the Annual Congress for five terms.

**Michael C. Perry, MD,** director of hematology and oncology and the Nellie B. Smith Chair in Oncology will direct the first phase of a trial for a drug developed by the Immunex Corp of Seattle. The drug is designed to curb weight loss in cancer patients.

Three psychiatry and neurology faculty travelled to northern China to speak to the country's academic and medical communities. **Bernard D. Beitman, MD,** professor and chair; **Danny Wedding, PhD,** professor and director of the Missouri Institute of Mental Health in St. Louis; and **James R. Slaughter, MD,** assistant professor, spent two weeks meeting with and lecturing to psychiatrists and psychologists from all over China. The trip was sponsored by the department of medical psychology at China Medical University in Shen-Yang, where Dr. Beitman's book, *The Structure of Individual Psychotherapy,* is currently being translated into Chinese.

## St. Louis University

**John D. Bouhasin, MD,** clinical professor in the department of pediatrics, has received a contract award from Public Health Service/University of Iowa to support the Regional Comprehensive Hemophilia Center at Cardinal Glennon Children's Hospital. The contract also will be used for risk reduction in hemophiliacs with HIV. Dr. Bouhasin and his colleagues will explore ways of preventing the spread of the disease to household members and significant others.

**Lawrence M. Lewis, MD,** associate professor of surgery and director of the division of emergency medicine, has received a one-year grant from the Hartford Foundation - Society for Academic Emergency Medicine to develop an evaluation tool for use in emergency departments to detect delirium in elderly patients.

**Anthony J. Regent, MD,** clinical professor of pediatrics in the division of pulmonary medicine and director of the Cystic Fibrosis Center, has received a two-year contract for Genentech, Inc. for an epidemiologic study of cystic fibrosis.

Kenneth R. Smith Jr., MD, professor of surgery and director of the division of neurosurgery was named president-elect of the Society of Neurological Surgeons at its recent meeting.

A summer program will allow high school students interested in medicine to meet patients, conduct their own experiments, monitor heart and brain surgery using 3-D video technology and dissect specimens. The Adventures in Medicine and Science (AIMS) program accommodates 200 students over a four-week period this month. It is offered by the Practical and Surgical Technique workshop of St. Louis, a non-profit medical educational organization, in conjunction with St. Louis University. **Paul H. Young, MD,** is clinical faculty and surgeon with the Microsurgery and Brain Research Institute is AIMS creator.

## Washington University

**Leonard Berg, MD,** professor of neurology, received a five-year grant from the National Institute on Aging for a research project titled, "Healthy Aging and Senile Dementia."

**Henry J. Kaplan, MD,** professor and head of the department of ophthalmology and visual sciences, received a five-year grant from the National Eye Institute for a research project titled, "Experimental Acute Anterior Uveitis."

**Jay S. Pepose, MD, PhD,** has been named the Bernard Becker Professor of Clinical Ophthalmology. The Becker Professorship is an endowed chair in the Department of Ophthalmology and Visual Sciences. It is one of two chairs which were instituted in 1983 in recognition of the service and leadership of **Bernard Becker, MD,** professor emeritus and head of ophthalmology from 1953 to 1988.

## University of Missouri-Kansas City

**John L. Barnard, MD,** retired July 1 from his role as associate dean of St. Luke's Hospital Programs, a position he has held since 1989. **Ralph R. Hall, MD,** will assume the associate dean position. Dr. Hall was vice president and medical director at Long Beach Memorial Medical Center in California.

**J. Stuart Munro, MD,** acting associate dean for academic affairs, received an Exemplary Psychiatrist Award for 1994 from the National Alliance for the Mentally Ill (NAMI). The award was given at the annual meeting of the American Psychiatric Association in May.

**Samuel Watts II, MD,** received the medical school's 1994 E. Grey Diamond, MD, Take Wing Award. The award recognizes alumni who demonstrate excellence in their chosen field and who exceed the expectations of peers in the practice of medicine. Dr. Watts has a private practice in

# IN MEMORIAM

■ **Edward P. Altomare, MD,** Kansas City, Missouri, died April 17, 1994, at age 82. Dr. Altomare received his medical degree at the University Medical Center, Rome, Italy, in 1939. He served as a captain in the Army Medical Corps during War World II. Dr. Altomare moved to Kansas City in the 1940s where he served as medical director at the Leeds Tuberculosis Sanitarium. He began private practice in 1948. He was a staff member at St. Joseph Health Center and Research Medical Center. Dr. Altomare was a member of the Metropolitan Medical Society of Greater Kansas City, American Medical Association, American Society of Anesthesiologists and the Jackson County Board of Services for the Developmentally Disabled. He was chairman of the Greater Kansas City Foundation for Citizens with Retardation and a member of the board of directors for the Foundation Work Shop and the Lost Child Network.

■ **Scott C. Benson, MD,** St. Joseph, Missouri, died April 16, 1994, at age 81. Dr. Benson received his medical degree at the University of Arkansas in 1948. He was a practicing surgeon in St. Joseph for 28 years before moving to Mesa, Arizona. Dr. Benson served on the faculty of the University of Missouri-Kansas City Medical School and on the student health faculty at Arizona State University. He retired in 1976. Dr. Benson was a member of the Buchanan County Medical Society, the Missouri State and American Medical Associations, and the American Academy of Family Physicians.

■ **Paul J. Bettonville, MD,** Kirkwood, Missouri, died May 3, 1994, at age 75. Dr. Bettonville received his medical degree at St. Louis University in 1942. He served in the Army in War World II and later in the Army Reserves, retiring as a lieutenant colonel in 1965. Dr. Bettonville was in private practice for 46 years before retiring in 1987. He was an assistant professor clinical medicine at St. Louis University. Dr. Bettonville was on the staffs of St. Louis University Medical Center, St. Mary's Health Center and St. Joseph Hospital. He was past president of the St. Louis Diabetes Association and the Missouri State Diabetes Association. He was a member of the American Society of Internal Medicine, the American Society of Clinical Pharmacology & Therapeutics, and the American Diabetes Association.

■ **Richard B. Fulks, MD,** California, Missouri, died April 6, 1994, at age 86. Dr. Fulks received his medical degree at Washington University in 1933. He then received his master's degree in public health from Columbia University. He worked a few years as a physician in CC Camps and then for 12 years in public health in Kentucky. Dr. Fulks returned to his hometown, California, Missouri, in 1949 and opened a family practice. He was the medical director at the California Care Center. Dr. Fulks retired in 1982. He was a member of the Missouri State Medical Association and the American Academy of Family Physicians.

■ **Judson M. Hughes, MD,** St. Joseph, Missouri, died April 13, 1994, at age 92. Dr. Hughes received his medical degree at University of Nebraska in 1925. He practiced in Iowa before he began a private practice in St. Joseph. From 1942 to 1946 he was in the Air Force Medical Corps. He retired in 1963 after practicing for more than 50 years as a pediatrician. Dr. Hughes was a member of the Buchanan County Medical Society, the Missouri State and American Medical Associations, and the American Occupational Medical Association.

■ **Roland P. Ladenson, MD,** Columbia, Missouri, died June 14, 1994, at age 75. Dr. Ladenson received his medical degree at Northwestern University Medical School in 1943. He served for over two years in the U.S. Army Medical Corps in a field hospital in the Philippines, New Guinea and Japan. Dr. Ladenson practiced internal medicine in Columbia for 35 years, until retiring in 1983. He was instrumental in effecting racial integration in the practice of medicine in Columbia. Dr. Ladenson was past president of the Boone County Medical Society, chief of the medical staff of Boone Hospital and president of the Missouri American Heart Association. He was a fellow of the American College of Physicians. Dr. Ladenson was a member of the American Society of Internal Medicine and American Physicians Fellowship, Inc.

■ **Levy M. Maravilla, MD,** Creve Coeur, Missouri, died May 21, 1994, at age 66. Dr. Maravilla received his medical degree at the College of Medicine Manila Central University, Manila, in 1951. He moved to St. Louis in 1963 and operated a family medical center for 30 years in south St. Louis County. Dr. Maravilla was on the staffs of St. Anthony's and Alexian Brothers hospitals. He retired in 1992. He was a member of the American Academy of Family Physicians.

■ **Paul Miltenberger, MD,** Columbia, Missouri, died April 18, 1994, at age 70. Dr. Miltenberger received his medical degree at the University of Cincinnati in 1941. During War World II he served in the U.S. Army Medical Unit and was decorated for bravery for his actions during combat in the Pacific theater. Dr. Miltenberger was a member of the American College of Surgeons.

■ **James J. Royce, MD,** Sarcoxie, Missouri, died May 28, 1994, at age 68. Dr. Royce completed the two-year medical program at the University of Missouri-Columbia in 1951. He received his medical degree at the University of Pittsburgh in 1953. He began medical practice in Sarcoxie in 1961. He practiced family medicine there until he retired in 1991. He operated Royce Manor Inc. from 1968 to 1988. Dr. Royce was a member of the Jasper County Medical Society, the Missouri State and American Medical Associations.

■ **Daniel Scagliotti, MD,** Overland Park, Kansas, died May 3, 1994, at age 48. Dr. Scagliotti received his medical degree at the Buenos Aires School of Medicine, Argentina, in 1970. He was a cardiologist for the Children's Cardiac Center at Children's Mercy Hospital. He specialized in electrophysiology. Dr. Scagliotti was a fellow of the American Academy of Pediatrics and the American College of Cardiology. He was a member of the American Federation of Clinical Research, the American Heart Association, the Metropolitan Medical Society of Greater Kansas City and the Pediatric Electrophysiology Society. He was on the editorial board of the *Pediatric Journal of Cardiology*.

■ **Herbert M. Smit, MD,** St. Louis, Missouri, died May 2, 1994, at age 86. Dr. Smit received his medical degree at St. Louis University in 1933. He served in the Navy Medical Corps during War World II. He practiced otolaryngology in St. Louis for more than 50 years. Dr. Smit was on the staffs at Barnes and McMillan hospitals. For 36 years he was in charge of the ear, nose and throat department at the old Missouri Pacific Hospital. He was also a clinical instructor at McMillan in the mid-1930s.

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AIR FORCE

# NEW MEMBERS

❖ **A. A. Armbruster, MD,** 3540 W. 199th St., Stilwell, KS 66085, has become a member of the Missouri State Medical Association. Dr. Armbruster received his medical degree at Loma Linda University in 1955. He completed his residency at Truman Medical Center-West. Dr. Armbruster specializes in general surgery.

❖ **John H. Bartow, DO,** 4601 Manor Drive, St. Joseph, MO 64506, has become a member of the Buchanan County Medical Society. Dr. Bartow received his doctor osteopathy at Kirksville College of Osteopathic Medicine in 1976. He completed his residency and fellowship at Oakland Naval Hospital. Dr. Bartow specializes in radiology.

❖ **Michael F. Boland, MD,** 3009 N. Ballas Rd., Suite 257C, St. Louis, MO 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Boland received his medical degree at the University of Missouri-Columbia in 1986. He completed his residency and fellowship at the University of Michigan. Dr. Boland specializes in neurosurgery.

❖ **John B. Chamberlin, MD,** 2000 NE Vivian Rd., Kansas City, MO 64118, has become a member of the Clay-Platte County Medical Society. Dr. Chamberlin received his medical degree at the University of Illinois in 1983. He completed his residency at the University of Missouri-Kansas City Affiliated Hospitals. Dr. Chamberlin specializes in internal medicine.

❖ **Malcolm J. Dickerson, MD,** Route 1, Box 492, Hwy. 87, Eldon, MO 65026, has become a member of the Cole County Medical Society. Dr. Dickerson received his medical degree at the University of California, San Francisco, in 1964. He completed his residency at Sonoma Community Hospital. Dr. Dickerson specializes in family practice.

❖ **Mark E. Grimm, MD,** 3231 S. National, Springfield, MO 65807, has become a member of the Greene County Medical Society. Dr. Grimm received his medical degree at Indiana University in 1982. He completed his residency and fellowship at the Cleveland Clinic Foundation. Dr. Grimm specializes in pulmonary disease.

❖ **Jeffrey P. Kirsch, MD,** 6125 Clayton Ave. #430, St. Louis, MO 63139, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kirsch received his medical degree at Tulane University in 1987. He completed his residency at Baylor University. Dr. Kirsch specializes in otolaryngology.

❖ **Gregory D. Launius, MD,** 1465 S. Grand, St. Louis, MO 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Launius received his medical degree at Chicago Medical School in 1987. He completed his residency at St. Louis University and fellowship at Cardinal Glennon Children's Hospital. Dr. Launius specializes in pediatric radiology.

❖ **Demetrios G. Maragos, MD,** 4400 Wornall Rd., Kansas City, MO 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Maragos received his medical degree at the University of Nebraska in 1987. He completed his residency and fellowship at the University of Nebraska. Dr. Maragos specializes in internal medicine and cardiology.

❖ **John W. McAllister II, MD,** 70 Jungermann Circle, St. Peters, MO 63376, has become a member of the St. Charles-Lincoln County Medical Society. Dr. McAllister received his medical degree at Washington University in 1984. He completed his residency at Barnes and Allied Hospitals. Dr. McAllister specializes in orthopedic surgery.

❖ **Thomas D. McClain, MD,** 2115 S. Fremont, Springfield, MO 65804, has become a member of the Greene County Medical Society. Dr. McClain received his medical degree at the University of Missouri-Columbia in 1981. He completed his residency and fellowship at the University of Iowa. Dr. McClain specializes in orthopedic surgery.

❖ **Mary Jo Middleton, MD,** 701 Faraon St., St. Joseph, MO 64501, has become a member of the Buchanan County Medical Society. Dr. Middleton received her medical degree at the University of Missouri-Kansas City in 1987. She completed her residency at the University of Kansas Medical Center. Dr. Middleton specializes in physical medicine and rehabilitation.

❖ **George R. Moreng, MD,** Suite 630, 2900 Baltimore, Kansas City, MO 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Moreng received his medical degree at the University of Minnesota in 1988. He completed his residency at the University of Texas and fellowship at

Kalamazoo Neurologic Institute. Dr. Moreng specializes in neurology.

❖ **Terrence L. Piper, MD,** 70 Jungermann Circle, St. Peters, MO 63376, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Piper received his medical degree at St. Louis University in 1975. He completed his residency at Washington University Barnes Hospital. Dr. Piper specializes in orthopedic surgery.

❖ **Anibal F. Prentice, MD,** Suite 630, 2900 Baltimore, Kansas City, MO 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Prentice received his medical degree at the Cayetano Heredia University, Lima, Peru, in 1984. He completed his residency at Baylor College and fellowship at Hospital of the Good Samaritan, Los Angeles. Dr. Prentice specializes in neurology.

❖ **Stephanie L. Rapke, MD,** 500 Keene St., Suite 203, Columbia, MO 65201, has become a member of the Boone County Medical Society. Dr. Rapke received her medical degree at the University of Maryland in 1977. She completed her residency at John Hopkins Hospital. Dr. Rapke specializes in radiation oncology.

❖ **Carlos D. Rul-Lan, MD,** 8511 Hillcrest, Suite 320, Kansas City, MO 64138, has become a member of the Missouri State Medical Association. Dr. Rul-Lan received his medical degree at St. Louis University in 1947. He completed his residency at Aquadilla District Hospital, Puerto Rico. Dr. Rul-Yan specializes in occupational medicine.

❖ **Marc J. Schechter, MD,** #35 Doctors' Park, Cape Girardeau, MO 63701, has become a member of the Cape Girardeau Area County Medical Society. Dr. Schechter received his medical degree at the New Jersey Medical School in 1981. He completed his residency at the University Medical Center, Newark, NJ. Dr. Schechter specializes in thoracic and cardiovascular surgery.

❖ **Thomas M. Schott, MD,** 70 Jungermann Circle, St. Peters, MO 63376, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Schott received his medical degree at John Hopkins University in 1988. He completed his residency at the University of Missouri-Columbia. Dr. Schott specializes in orthopedics.

❖ **Brad K. Stanley, MD,** 1515 W. Truman Rd. #404, Independence, MO 63050, has become a member of the Missouri State Medical Association. Dr. Stanley received his medical degree at the University of Kansas in 1988. He completed his residency at the University of Kansas. Dr. Stanley specializes in urology.

❖ **William K. Sullivan, MD,** has become a member of the Missouri State Medical Association. Dr. Sullivan received his medical degree at the University of Missouri-Columbia in 1974. He completed his residency at Yale University. Dr. Sullivan specializes in general preventative medicine.

❖ **Lawrence Tierney, MD,** 6 Jungermann Circle, St. Peters, MO 63376, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Tierney received his medical degree at the University of Illinois in 1988. He completed his residency at Loyola University. Dr. Tierney specializes in gastroenterology.

❖ **Wilbur D. Van Buren, MD,** 3406 Broadway, Kansas City, MO 64111, has become a member of the Missouri State Medical Association. Dr. Van Buren received his medical degree at St. Louis University in 1990. He completed his residency at the University of Kansas. Dr. Van Buren specializes in family practice.

❖ **Paul Williamson, MD,** 6601 Rockhill Rd., Kansas City, MO 64131, has become a member of the Missouri State Medical Association. Dr. Williamson received his medical degree at the University of Kansas in 1974. He completed his residency at HCA Wesley Medical Center. Dr. Williamson specializes in family practice.

## RESIDENTS

Gina K. Chatfield, MD - *Diagnostic Radiology*
Emmanuel Daon, MD - *General Surgery*
Joan E. Graff, MD - *Radiology*
Aaron B. Greenspan, MD - *Internal Medicine*
Elizabeth A. Kvale, MD - *Family Practice*
Carole McArthur, MD, PhD - *Pathology*
Scott E. Patrick, MD - *Diagnostic Radiology*
Sundar Rajendran, MD - *Anesthesiology*
Mona S.I. Roach, MD - *Family Practice*
James H. Tiemann, MD - *Family Practice*
Bradley R. Umbarger, MD - *Anesthesiology*
Mark R. Wakefield, MD - *Urology*
Jill L.G. Wenger, MD - *Anesthesiology*

## STUDENTS

*University of Missouri-Kansas City*
Adrienne Nguyen

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## July

8 & 9 - *St. Louis*: **Advanced Trauma Life Support Provider Course.** 16 credit hours. Contact Joyce Hope, 314/577-8802.
8 to 10 - *Springfield*: **Advanced Cardiac Life Support Provider Course.** 18 credit hours. Call Julie Hartley, 417/885-6111.
9 - *St. Louis*: **Advanced Trauma Life Support Provider Refresher Course.** 8 credit hrs. Call Joyce Hope, 314/577-8802.
13, 20, 27 (eves. 7 to 9 pm) - *St. Louis*: **Seventh Annual John H. Kendig Lecture Series.** St. John's Mercy, 314/569-6290.
15 - *San Francisco, CA*: **Frontiers in Ovulation Induction.** Washington University 314/362-6893, 800/325-9862 interstate.
15 - *Springfield*: **Breast Cancer Symposium Early Diagnosis and Treatment.** 4 credit hours. Call Donna Gloe, 417/885-2770.
16 - *Irvine, CA*: **Corneal Topography Skills Transfer.** 7 credit hours. Contact Kerry Assil, MD, 314/865-8333.
16 & 17 - *Springfield*: **Advanced Cardiac Life Support Course.** 17.4 credit hours. Call Maryann Jeter, 417/885-5400.
18 - **Audioconference - The Use of Hematopoietic Growth Factors in HIV Infection.** 1 credit hr. Call INCE 800/222-4623.
20 - *St. Louis*: **Pediatric Advanced Life Support Recertification Course.** 7 credit hrs. Mary Beth Foerstel, 314/577-5385.
21 - **Audioconference - The Use of Hematopoietic Growth Factors in HIV Infection.** 1 credit hr. Call INCE 800/222-4623.
21 to 23 - *Silverado, Napa Valley, CA*: **Workshop on Stress Echocardiography.** 14 credit hrs. Beth M. Paul, St. Luke's Hospital, 816/932-2301 or 816/932-5119.
23 & 24 - *St. Louis*: **Learning from the Masters: Preying on the Success of Others.** 16.25 credit hrs. Mary Fran Ernst, 314/522-6410, ext. 6509.
24 to 29 - *Crested Butte, CO*: **Medical Marriages: Balancing Commitments to Family and Profession featuring Dr. Roy & Bev Menninger.** 24 credit hours. Contact Menninger Continuing Education, 800/288-7377.
28 - **Audioconference - The Use of Hematopoietic Growth Factors in HIV Infection.** 1 credit hr. Call INCE 800/222-4623.
28 to 30 - *St. Louis*: **Clinical Allergy for the Practicing Physician.** Washington University, 314/362-6893, 800/325-9862 interstate.
29 to 31 - *St. Louis*: **9th Annual Convention of the Huntington's Disease Society of America.** HSDA, St. Louis Chapter, 7603 Forsyth St., Suite 208, Clayton, MO 63105.
31 to August 7 - *Keystone, CO*: **Specialists Topics as They Apply to Primary Care.** 12 credit hours. Contact David Paff, MD, 417/885-0801, or Jim Blaine, MD, 417/888-5672.

## August

3 - **Audioconference - The Use of Hematopoietic Growth Factors in HIV Infection.** 1 credit hr. Call INCE 800/222-4623.
5 to 7 - *Hood College, Frederick, MD*: **Civil War Medicine, 2nd Annual Conference.** Write to the National Museum of Civil War Medicine, P.O. Box 470, Frederick, MD 21705-0470.
5 to 7 - *St. Louis*: **Myocutaneous Flap Reconstruction in the Head and Neck.** St. Louis University, 314/577-8167 or 1-800-553-2712.
11 - **Audioconference - The Use of Hematopoietic Growth Factors in HIV Infection.** 1 credit hr. Call INCE 800/222-4623.
18 - **Audioconference - The Use of Hematopoietic Growth Factors in HIV Infection.** 1 credit hr. Call INCE 800/222-4623.
18 & 19 - *St. Louis*: **Advanced Applications in Endoscopic Neurosurgery.** 14 credit hours. St. Louis University, 314/577-8167 or 1-800-553-2712.
19 & 20 - *Springfield:* **Advanced Cardiac Life Support Provider Course.** 15.5 credit hrs. Call Linda Climer 417/885-2806.
22 - **Audioconference - The Use of Hematopoietic Growth Factors in HIV Infection.** 1 credit hr. Call INCE 800/222-4623.
25 - **Audioconference - The Use of Hematopoietic Growth Factors in HIV Infection.** 1 credit hr. Call INCE 800/222-4623.
26 - *Springfield*: **Pediatric Advanced Life Support Recertification.** 7 credit hours. Call 417/885-4117.

## September

7 - *Washington, MO*: **What's New in Genetics.** 1 credit hour. Contact Cardinal Glennon, Bob Jaeger, 314/772-8300.
7 to 10 - *Jefferson City*: **The Essentials of Infection Control.** E & R Trust, 314/751-6115.
9 - *Springfield*: **Advanced Cardiac Life Support Re-Education Course.** 8 credit hours. Call Julie Hartley 417/885-6111.
10 & 11 - *Columbia*: **4th Annual Conference: Caring for the Frail and Elderly.** Contact Laurie Seigel, University of Missouri, 314/882-4105.
11 - *Houston, TX*: **Corneal Topography Skills Transfer.** 7 credit hours. Contact Kerry Assil, MD, 314/865-8333.
12 - *St. Louis*: **The Thomas F. Maher Lecture in Radiology "MRI of the Female Pelvis".** Call St. John's Mercy Medical Center, 314/569-6290.
12 to 14 - *St. Louis*: **Pediatric Advanced Cardiac and Trauma Support for Life/Pediatric Advanced Life Support Provider Course.** 20 credit hrs. Call Mary Beth Foerstel, 314/577-5385.
14 to 16 - *Kansas City*: **Complex Coronary Angioplasty and New Interventional Devices.** 20 credit hours. Contact Beth M. Paul, St. Luke's Hospital, 816/932-2301 or 816/932-5119.
16 & 17 - *Kansas City*: **Ralph R. Coffey Surgical Symposium.** 12 credit hours. Contact Carol Osborne, St. Luke's Hospital, 816/932-3737, 816/932-5119.
16 & 17 - *St. Louis*: **Third Annual Infectious Disease Conference.** 6 credit hours. Contact Cindy Wuller, 314/367-8700.
17 - *St. Louis*: **Parkinson's Disease.** Contact Washington University, 314/362-6893 or 800/325-9862 - interstate.
24 - *St. Louis*: **Anxiety & Depression.** Washington University 314/362-6893, 800/325-9862 interstate, fax 314/362-1087.
27 & 28 - *St. Louis*: **Transesophageal Echocardiography.** 13 credit hours. Contact Dianne Reid, 314/577-8897.
27 to 29 - *St. Louis*: **Surgical Approaches to the Skull Base.** 24 credit hrs. St. Louis University, 314/577-8167 or 1-800-553-2712.
30 & Oct. 1 - *St. Louis*: **Physician Executive Leadership.** Washington University, 314/362-6893 in Missouri, 800/325-9862 interstate, fax 314/362-1087.

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In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: **"In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA."** We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

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Manuscripts should be typewritten, double-spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the authors should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript. Manuscripts may be submitted on floppy disks or diskette using WordPerfect 5.1 or other compatible wordprocessing.

### References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for the reference accuracy.

### Illustrations

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Reprint order blanks will accompany proof, and will be sent to authors prior to publication.

### Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages and typed with double spacing. Letters will be published at the discretion of the editor, managing editor, and editorial board.

### Deadlines

All material other than scientific should be received prior to the first of the month preceding month of publication.

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**References:**
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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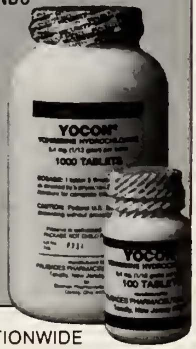

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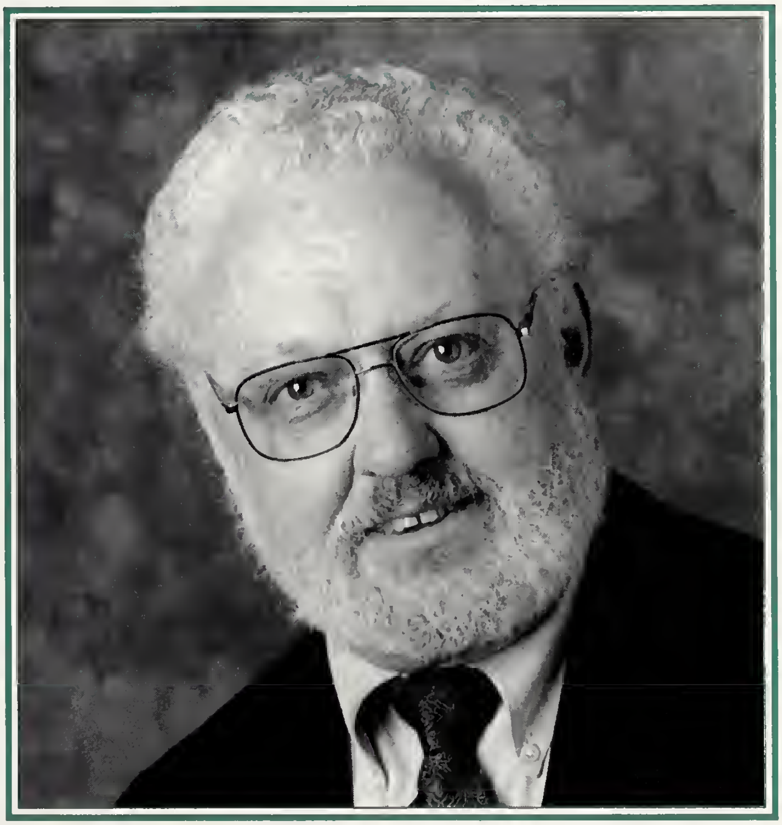
# MSMA PRESIDENT-ELECT



## H. Jerry Murrell, MD

H. JERRY MURRELL, M.D., a specialist in radiation oncology from Columbia, Mo., will serve as President of the Missouri State Medical Association during 1994-1995. He will be formally installed during the 136th Annual Convention to be held in Kansas City, Mo.

Dr. Murrell received his undergraduate degree from Rice University in 1958 and his medical degree from the University of Texas in 1962. Following an internship at the Sacramento County Hospital, he served on active duty with the U.S. Navy until 1965. His medical training also includes a family practice residency at the Sonoma County Hospital in California and a radiology residency completed at the Mallinckrodt Institute of Radiology in 1969. Dr. Murrell is certified by the American Board of Radiology (Radiology and Therapeutic Radiology) and the American Board of Nuclear Medicine.

Long active in organized medicine, Dr. Murrell currently serves as chairman of the MSMA Legislative Committee and as President-Elect. He is the immediate past chairman of the MSMA Council. In addition to his MSMA activities, he is a Delegate to the Medical School Section of the AMA and a Fellow of the American Society of Radiology. He is a member of the Boone County Medical Society, the American Society of Therapeutic Radiology and Oncology, and the Missouri Society of Radiologists.

As Dr. Murrell assumes this key leadership position for the Association, he asks for the continued support and involvement of all MSMA members. "It is imperative that we speak with one voice so that we can be heard clearly by all parties involved in the health care reform debate."

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## GENERAL

**Mark your calendar now**. The Missouri State Medical Association's 136th Annual Convention will be held April 7-10, 1994, at the Westin Crown Center in Kansas City. This Annual Convention will feature numerous activities and scientific sessions representing 22 specialties in addition to the MSMA Alliance events. This is an excellent opportunity for you to participate in Continuing Medical Education activities.

All registrants are invited to attend the House of Delegates' sessions and reference committees. Whether or not you are serving as a Delegate, you will find the sessions interesting with the deliberations impacting your practice of medicine.

## CONTINUING MEDICAL EDUCATION

The Missouri State Medical Association is accredited by the Accreditation Council for Continuing Medical Education to sponsor Continuing Medical Education activities.

The Missouri State Medical Association designates the Continuing Medical Education offerings as Category I or Category II of the Physician's Recognition Award of the American Medical Association.

The American Academy of Family Physicians will designate the scientific programs for Prescribed or Elective Credit.

## PRE-REGISTRATION

Please complete and return the self-addressed pre-registration form on the last page of this program. Upon receipt of your form, the MSMA will forward a confirmation card that is to be presented to the MSMA staff at the Convention registration desk. Your registration packet and name badge will be awaiting your arrival.

For more information regarding MSMA's 136th Annual Convention, call 314/636-5151.

## HOTEL RESERVATIONS

The enclosed reservation envelope has been provided for your convenience in making your hotel reservations. **Hotel reservations must be made prior to March 16, 1994, to take advantage of the reduced room rate.**

# 1994 ANNUAL CONVENTION SCIENTIFIC PROGRAM

(listed alphabetically by sponsoring organization)

## ALLERGY

*Objectives: Following the program, the participants will be able to: 1) describe the interaction between respiratory infections and immunodeficiency; 2) identify proper techniques for confirming the diagnosis of latex allergy; 3) describe how allergy extracts are produced and standardized; 4) describe the necessity for outcome studies and what they tell us; and 5) list methods used to test for environmental exposure to allergens.*

| | |
|---|---|
| Friday, April 8 | |
| 6:30 p.m. | **Scientific Program**/Dinner (Hereford House)<br>"Health Care Reform"<br>**Speaker:** Tom Fischer, M.D., Associate Professor of Pediatrics, University of Cincinnati; Associate Director, Division of Allergy/Immunology, Cincinnati Children's Hospital, Cincinnati, Ohio<br>**Moderator:** Jay Portnoy, M.D., Kansas City |
| Saturday, April 9 | |
| 8:00-8:30 a.m. | Continental Breakfast |
| 8:30-11:45 a.m. | **Scientific Program**<br>"Immunodeficiency and Respiratory Diseases"<br>**Speaker:** Tom Fischer, M.D., Cincinnati, Ohio |
| 9:15 a.m. | "Latex Allergy"<br>**Speaker:** Michael Blaiss, M.D., Associate Professor and Director of Allergy Training Program, Lebonheur Children's Medical Center, University of Tennessee, Memphis, Tennessee |
| 10:00 a.m. | Break |
| 10:15 a.m. | "Allergy Extracts - What are They?"<br>**Speaker:** James Thompson, Ph.D., Manager of Botanical Services, Miles Hollister-Stier, Inc., Monmouth, Oregon |

| | |
|---|---|
| 11:00 a.m. | "Outcome Studies for Allergy"<br>**Speaker:** Michael Blaiss, M.D., Memphis, Tennessee |
| | **Moderator:** Jay Portnoy, M.D., Kansas City |
| 11:45-1:30 p.m. | Business Meeting/Luncheon |
| 1:30-3:15 p.m. | **Scientific Program**<br>"Allergens in the Environment"<br>**Speaker:** James Thompson, Ph.D., Monmouth, Oregon |
| 2:15 p.m. | Fellow's Abstracts |
| | **Moderator**: Jay Portnoy, M.D., Kansas City |
| 3:15 p.m. | Reception |

**Sponsored by the Missouri State Allergy Association**

## ANESTHESIOLOGY

| | |
|---|---|
| Friday, April 8 | |
| 6:00-8:00 p.m. | First Session/Missouri Society of Anesthesiologists' House of Delegates |
| 8:00-9:00 p.m. | Reception |
| TBA | Resident Section Meeting |
| Saturday, April 9 | |
| 7:30-9:00 a.m. | Reference Committee Meetings<br>Fiscal Reference Committee<br>Administrative Reference Committee<br>Legislative Reference Committee |
| 9:00-10:45 a.m. | **Scientific Program** |
| 11:00-12:30 p.m. | Luncheon |
| 12:45-2:45 p.m. | **Scientific Program** |
| 3:00 p.m. | Second Session/Missouri Society of Anesthesiologists' House of Delegates |

**Sponsored by the Missouri Society of Anesthesiologists**

## CANCER

Saturday, April 9

12:30 p.m. **Scientific Program**/Luncheon
"Has there been Significant Survival from Widespread Detection in Breast Cancer?"
**Speaker:** David M. Ota, M.D., F.A.C.S., Medical Director, Chief, Division of Surgical Oncology, Ellis Fischel Cancer Center, Columbia

**Sponsored by the American Cancer Society, Missouri Division**
**Co-Sponsored by the Missouri Chapter, American College of Surgeons**

## GLAUCOMA SCREENING & EDUCATION PROGRAM

**The Missouri Ophthalmological Society, Inc.**
**and the American Academy of Ophthalmology**
**will conduct a Glaucoma Screening**
**and Education Program**
**for all participants of the MSMA's Annual Convention.**

## DERMATOLOGY

Friday, April 8

2:00 p.m. **Scientific Program**

5:30 p.m. Board of Directors' Meeting

Saturday, April 9

8:30-4:30 p.m. **Scientific Program**
*Registration: $80 for Society members, $125 for non-members (payable in advance)*

**Sponsored by the American Academy of Dermatology**

7:00 p.m. Dinner

Sunday, April 10

12:00 noon Business Meeting

**Sponsored by the Missouri Dermatological Society**

## EMERGENCY PHYSICIANS

*Objectives: After attending this session, health care providers will have a greater understanding of the dynamics of domestic violence and the battering of women. This session will assist health care providers in the identification, diagnosis, treatment, medical record documentation and other interventions for victims of domestic violence.*

Saturday, April 9

9:00-12:00 noon **Scientific Program**
"Domestic Violence: A Health Care Crisis for Women"
**Speakers:** Coleen Kivlahan, M.D., Director, Missouri Department of Health, Jefferson City and Ms. Coleen Coble, Executive Director, Missouri Coalition Against Domestic Violence, Jefferson City
**Panelists:** Robert L. Muelleman, M.D., F.A.C.E.P., Truman Medical Center, Kansas City; James Kelly, M.D., Children's Mercy Hospital, Kansas City; Thomas Anderson, M.D., Missouri Psychiatric Association, Columbia; Jo-Ellyn M. Ryall, M.D., Psychiatrist, St. Louis; Ms. Deborah Furnell, Program Development Specialist, Department of Social Services, Division of Family Services, Jefferson City

**Sponsored by the Missouri Chapter, American College of Emergency Physicians**
**Co-Sponsored by the Missouri Chapter, American Academy of Pediatrics**
**Missouri Psychiatric Association**
**American Medical Women's Association**

## FAMILY PHYSICIANS

*Objectives: Following the program, the participants will be able to utilize new migraine headache treatments and will be able to discuss the rationale for diagnostic workup for headaches. The participants will be informed of current cancer screening guidelines, procedures and testing.*

Saturday, April 9

8:00 a.m. Continental Breakfast

8:30-11:00 a.m. Board of Directors' Meeting

11:00-12:30 p.m. **Scientific Program**
"Cancer Screening"
**Speaker:** Michael C. Wulfers, M.D., Cape Girardeau

1:30-3:00 p.m. **Scientific Program**
"Migraine Overview"
**Speaker:** Roger Cady, M.D., Medical Director, Shealy Institute, Springfield

**Moderator:** Marla Tobin, M.D., Higginsville

**Sponsored by the Missouri Academy of Family Physicians**

## HEART ASSOCIATION

*Objectives: Participants will be provided with an update on: 1) risk factors for heart disease; 2) similarities and differences between men and women on the development, diagnosis, and treatment of heart disease; 3) post menopausal estrogen replacement therapy; and 4) what areas of research need to be emphasized in regards to women and heart disease.*

Friday, April 8

11:00-12:00 noon **Scientific Program**
"Women and Heart Disease: Effect of Different Estrogen Compounds on LDL Cholesterol Subfractions"
**Speaker:** Linda Gerrond, M.D., Assistant Professor of Medicine, University of Kansas School of Medicine, Kansas City, Kansas

**Sponsored by the American Heart Association**

## INTERNAL MEDICINE

Saturday, April 9

12:00 noon Board Meeting/Luncheon

**Sponsored by the Missouri Society of Internal Medicine**

## INTERNATIONAL PHYSICIANS

Saturday, April 9

7:00 a.m. Breakfast

9:00 a.m. **Scientific Program**

12:00 noon Meeting/Luncheon

**Sponsored by the Missouri Chapter, American College of International Physicians**

## NEUROLOGY

Saturday, April 9

10:00 a.m. **Scientific Program**
"Administrative and Economic Aspects of Neurological Practice Under the Clinton Health Care Plan"

11:00 a.m. Membership Meeting

12:00 noon Reception

**Sponsored by the Missouri State Neurological Association**

## NEUROSURGERY

Saturday, April 9

| | |
|---|---|
| 12:00-2:00 p.m. | **Scientific Program**/Luncheon/Business Meeting |

**Sponsored by the Missouri State Neurosurgical Society**

## OPHTHALMOLOGY

*Objective: To provide the practicing ophthalmologists with up-to-date practical information that will assist with patient care and diagnosis and treatment.*

Friday, April 8

| | |
|---|---|
| 7:30 a.m. | Board of Directors' Meeting |

Saturday, April 9

| | |
|---|---|
| 8:00-8:30 a.m. | Registration/Continental Breakfast |
| 8:30-12:00 noon | **Scientific Program**<br>Resident Papers |
| 9:30 a.m. | Break |
| 9:45 a.m. | "Dry Eye Syndrome: Diagnosis and Management"<br>**Speaker:** John P. Whitcher, M.D., Professor of Clinical Ophthalmology and Associate Director, Francis I. Proctor Foundation, University of California, San Francisco, California |
| 10:30 a.m. | Resident Papers |
| 12:00-1:30 p.m. | Business Meeting/Luncheon |
| 1:30-4:30 p.m. | **Scientific Program**<br>Resident Papers |
| 2:45 p.m. | Break |
| 3:00 p.m. | "Current Treatment of Endophthalmitis"<br>**Speaker:** John P. Whitcher, M.D., San Francisco, California |
| 3:45 p.m. | "Refractive Surgery 1994 and Beyond"<br>**Speakers:** Michael R. Deitz, M.D., Kansas City; Daniel S. Durrie, M.D., Kansas City; Camille S. Matta, M.D., Kansas City; Larry W. Piebenga, M.D., Kansas City; and Joseph Tauber, M.D., Kansas City |
| 4:30-5:30 p.m. | Reception |

**Sponsored by the Missouri Ophthalmological Society, Inc.**

# OTOLARYNGOLOGY

Saturday, April 9

| | |
|---|---|
| 7:00 a.m. | Breakfast Meeting |
| 7:45 a.m. | **Scientific Program**<br>"RBRVS for Otolaryngology - Head and Neck Surgery"<br>**Speaker:** Michael D. Maves, M.D., AAO-HNS Representative, AMA RBRVS Update Committee, St. Louis |
| 9:00-12:00 noon | **Scientific Program**<br>"Voice and Swallowing Problems" |
| 9:00 a.m. | "Voice Surgery"<br>**Speaker:** John F. Eisenbeis, M.D., Assistant Professor, Department of Otolaryngology - Head and Neck Surgery, St. Louis University School of Medicine, St. Louis |
| 9:45 a.m. | Questions and Answers |
| 10:00 a.m. | "Diagnosis of Voice Disorders"<br>**Speaker:** Gary LaBlance, Ph.D., Assistant Professor, Speech Pathologist, St. Louis University School of Medicine, St. Louis |
| 10:30 a.m. | Questions and Answers |
| 10:45 a.m. | Break |
| 11:00 a.m. | "Diagnosis and Management of Reflux Esophagitis"<br>**Speaker:** Wendell Clarkston, M.D., Assistant Professor, Gastroenterology, St. Louis University School of Medicine, St. Louis<br>**Moderator**: Michael D. Maves, M.D., St. Louis |

**Sponsored by the Missouri Society of Otolaryngology - Head and Neck Surgery**

# PATHOLOGY

*Objectives: Following this session, the participants will have enhanced knowledge of stereotactic brain biopsies - a common surgical procedure presenting special problems to the pathologist.*

Saturday, April 9

| | |
|---|---|
| 9:00 a.m. | Continental Breakfast |
| 10:00-11:45 a.m. | **Scientific Program**<br>"Stereotactic Needle Biopsies of the Brain: Opportunities and Pitfalls"<br>**Speaker:** John J. Kepes, M.D., Emeritus Professor of Pathology, University of Kansas Medical Center, Kansas City, Kansas |

11:00 a.m. Break

11:15 a.m. Discussion

**Moderator:** William Dorzab, M.D., Kansas City

12:00 noon Luncheon

12:30 p.m. Business Meeting

1:30 p.m. Board of Directors' Meeting

**Sponsored by the Missouri Society of Pathologists**

## PEDIATRICS

*Objectives: After attending this session, health care providers will have a greater understanding of the dynamics of domestic violence and the battering of women. This session will assist health care providers in the identification, diagnosis, treatment, medical record documentation and other interventions for victims of domestic violence.*

Saturday, April 9

9:00-12:00 noon **Scientific Program**

"Domestic Violence: A Health Care Crisis for Women"

**Speakers:** Coleen Kivlahan, M.D., Director, Missouri Department of Health, Jefferson City and Ms. Coleen Coble, Executive Director, Missouri Coalition Against Domestic Violence, Jefferson City

**Panelists:** Robert L. Muelleman, M.D., F.A.C.E.P., Truman Medical Center, Kansas City; James Kelly, M.D., Children's Mercy Hospital, Kansas City; Thomas Anderson, M.D., Missouri Psychiatric Association, Columbia; Jo-Ellyn M. Ryall, M.D., Psychiatrist, St. Louis; Ms. Deborah Furnell, Program Development Specialist, Department of Social Services, Division of Family Services, Jefferson City

**Sponsored by the Missouri Chapter, American Academy of Pediatrics**
**Co-Sponsored by the Missouri Psychiatric Association**
**American Medical Women's Association**
**Missouri Chapter, American College of Emergency Physicians**

## PHYSICAL MEDICINE & REHABILITATION

*Objectives: After attending this session, participants will have a better understanding of how to recognize and treat movement disorders, what type of functional measures to use, and how and when to use neuropharmacological drugs in traumatic brain injury patients.*

Saturday, April 9

9:30-10:00 a.m. Continental Breakfast

*(Physical Medicine & Rehabilitation continued page 12)*

10:00-12:30 p.m. **Scientific Program**
"The Recognition and Treatment of Movement Disorders in Traumatic Brain Injury"
**Speaker:** Mark Stacy, M.D., Assistant Professor, Department of Psychology and Neurology, University of Missouri - Columbia School of Medicine, Columbia

10:45 a.m. "New Directions in Functional Outcome Measures for Rehabilitation"
**Speaker:** Robert Rondinelli, M.D., Associate Professor and Chairman, Department of Physical Medicine and Rehabilitation, University of Kansas Medical Center, Kansas City, Kansas

11:30 a.m. "Health Reform in Missouri and its Interaction with National Health Reform"
**Speaker:** Robert G. Frank, Ph.D., Professor and Vice Chairman, Department of Physical Medicine and Rehabilitation, University of Missouri - Columbia School of Medicine, Columbia

12:30-1:00 p.m. Business Meeting/Luncheon

1:30-4:00 p.m. **Scientific Program**
"The Use of Neuropharmacological Agents in the Management of Traumatic Brain Injury"
**Speaker:** Jon Rupright, D.O., Assistant Professor of Clinical Physical Medicine and Rehabilitation, Department of Physical Medicine and Rehabilitation, University of Missouri - Columbia School of Medicine, Columbia

2:15 p.m. Resident Presentations

**Moderator:** Henry H. Stonnington, M.D., Columbia

**Sponsored by the Central Society of Physical Medicine and Rehabilitation**

## PLASTIC & RECONSTRUCTIVE SURGERY

*Objectives: The program is designed to provide useful information to the plastic surgeon. Didactic lectures will be given followed by discussion covering various topics. Participants should be able to compare new techniques to the more traditional methods used in the area of plastic and reconstructive surgery.*

Friday, April 8

2:30-4:00 p.m. **Scientific Program**
"Update on Plastic Surgery"
**Speaker:** Federico Gonzales, M.D., Section Chief, Division of Plastic Surgery, University of Missouri - Kansas City School of Medicine

3:30 p.m. "Update on Plastic Surgery"
**Speaker:** John Hiebert, M.D., Chairman, Department of Plastic Surgery, University of Kansas Medical Center, Kansas City, Kansas

Saturday, April 9
7:00 a.m. Board of Directors' Meeting

7:30 a.m. Breakfast Meeting

9:00-11:00 a.m. **Scientific Program**
"Update on Plastic Surgery"
**Speaker:** Paul Weeks, M.D., Chief, Division of Plastic Surgery, Washington University School of Medicine, St. Louis

9:30 a.m. "Update on Plastic Surgery"
**Speaker:** C. Lin Puckett, M.D., Chairman, Department of Plastic Surgery, University of Missouri - Columbia School of Medicine, Columbia

10:30 a.m. "Update on Plastic Surgery"
**Speaker:** Sameer Shedhadi, M.D., Chairman and Professor, Division of Plastic Surgery, St. Louis University School of Medicine, St. Louis

**Sponsored by the Missouri Association of Plastic and Reconstructive Surgeons**

## PSYCHIATRY

*Objectives: After attending this session, health care providers will have a greater understanding of the dynamics of domestic violence and the battering of women. This session will assist health care providers in the identification, diagnosis, treatment, medical record documentation and other interventions for victims of domestic violence.*

Saturday, April 9
9:00-12:00 noon **Scientific Program**
"Domestic Violence: A Health Care Crisis for Women"
**Speakers:** Coleen Kivlahan, M.D., Director, Missouri Department of Health, Jefferson City and Ms. Coleen Coble, Executive Director, Missouri Coalition Against Domestic Violence, Jefferson City
**Panelists:** Robert L. Muelleman, M.D., F.A.C.E.P., Truman Medical Center, Kansas City; James Kelly, M.D., Children's Mercy Hospital, Kansas City; Thomas Anderson, M.D., Missouri Psychiatric Association, Columbia; Jo-Ellyn M. Ryall, M.D., Psychiatrist, St. Louis; Ms. Deborah Furnell, Program Development Specialist, Department of Social Services, Division of Family Services, Jefferson City

**Sponsored by the Missouri Psychiatric Association**
**Co-Sponsored by the American Medical Women's Association**
**Missouri Chapter, American College of Emergency Physicians**
**Missouri Chapter, American Academy of Pediatrics**

*(Psychiatry continued page 14)*

2:00 p.m. **Scientific Program**
"Sexual Compulsivity: A Discussion Regarding the Healthy Boundaries between Physician and Patient"
**Speaker:** Richard R. Irons, M.D., Medical Director, Professional Assessment Program, Minneapolis, Minnesota

**Sponsored by the Missouri Psychiatric Association**
**Co-Sponsored by the Missouri Physicians Health Committee**

## PRE-REGISTRATION IN PROGRESS!

**Don't forget to complete and return the self-addressed pre-registration form on the last page of this program.**

**For more information about MSMA's 136th Annual Convention, call 314/636-5151.**

## RADIOLOGY

*Objectives: Following this session, participants will be better informed on: 1) Clinton's Health Care Reform issues; 2) managed health care products and their relationships to our specialty; 3) Missouri state health reform issues; and 4) physician - hospital organizations with specific emphasis on hospital-based physicians.*

Saturday, April 9

8:00 a.m. Continental Breakfast

10:00 a.m. Break

11:30 a.m. Luncheon

1:30-3:30 p.m. **Scientific Program**
"Health Care Reform: Physician - Hospital Organizations"
**Speaker:** Mr. Richard M. Abell, Chairman, Missouri Hospital Association, Kansas City

"Health Care Reform: Managed Care Issues Affecting Hospital-Based Physicians"
**Speaker:** Mr. Robert Holmquist, Staff, American College of Radiology, Reston, Virginia

5:00 p.m. Reception

**Sponsored by the Missouri State Radiological Society**

# SURGERY

*Objectives: The topics will provide the audience with a current update on commonly encountered surgical diseases such as breast disease, peripheral vascular disease and trauma. The speakers will address diagnostic and therapeutic modalities for each of these surgical problems and expected outcomes. The audience will receive an update on the Missouri state trauma system.*

Friday, April 8

11:00-12:30 p.m. **Scientific Program**

"Update on Trauma Center Designation in the State of Missouri"
**Speaker:** Robert L. Coscia, M.D., Chairman, American College of Surgeons' Committee on Trauma, Springfield

"Pediatric Trauma Care in the Missouri Trauma System"
**Speaker**: Mary A. Helikson, M.D., Associate Professor of Surgery, University of Missouri - Columbia School of Medicine, Columbia

"The Health of Missouri's Trauma System"
**Speaker:** Mr. Garland Land, Director, Division of Health Resources, Missouri Department of Health, Jefferson City

**Moderator:** Thomas S. Helling, M.D., Kansas City

**Sponsored by the Missouri State Surgical Society**

Saturday, April 9

9:00-10:30 a.m. **Scientific Program**

"Treatment of Early Breast Cancer - Surgical Options"
**Speaker:** Paul G. Koontz Jr., M.D., Clinical Professor of Surgery, University of Missouri - Kansas City School of Medicine, Kansas City

"Early Treatment of Breast Cancer - Adjuvant Therapy"
**Speaker:** Karl H. Hanson Jr., M.D., Kansas City

"Treatment of Early Breast Cancer - Role of Radiation"
**Speaker:** Arthur J. Elman, M.D., Director of Radiation Oncology, St. Luke's Hospital, Kansas City

"Advanced Breast Carcinoma"
**Speaker:** Robert J. Belt, M.D., Director of Oncology, St. Luke's Hospital, Kansas City

**Moderator:** Thomas S. Helling, M.D., Kansas City

**Co-Sponsored by the Missouri Chapter, American College of Surgeons**

*(Surgery continued page 16)*

*(Surgery continued)*

9:00-10:30 a.m. *continued*

"Treatment of Lower Extremity Vascular Disease"
**Speaker:** Donald Silver, M.D., Chairman, Department of Surgery, University of Missouri Health Sciences Center, Columbia

"The Approach to Aortoiliac Disease"
**Speaker:** Charles B. Anderson, M.D., Professor of Surgery, Washington University School of Medicine, St. Louis

"Carotid Artery Disease"
**Speaker:** Joe A. Pinkerton Jr., M.D., Clinical Professor of Surgery, University of Missouri - Kansas City School of Medicine, Kansas City

**Moderator:** Thomas S. Helling, M.D., Kansas City

**Sponsored by the Missouri State Surgical Society**

11:00 a.m. Break

12:30 p.m. **Scientific Program**/Luncheon
"Has there been Significant Survival from Widespread Detection in Breast Cancer?"
**Speaker:** David M. Ota, M.D., F.A.C.S., Medical Director, Chief, Division of Surgical Oncology, Ellis Fischel Cancer Center, Columbia

**Sponsored by the Missouri Chapter, American College of Surgeons**
**Co-Sponsored by the American Cancer Society, Missouri Division**

## THORACIC

*Objectives: Following the program, the participants: 1) will gain an understanding of the inflammatory process taking place at the cellular level in the airways of asthmatics; 2) will become familiar with chemical mediators of the inflammatory process; and 3) will be able to better select anti-inflammatory agents used for the treatment of asthma.*

Saturday, April 9

8:00-8:45 a.m. **Scientific Program**
Annual Charles A. Brasher, M.D., Memorial Lectureship
"Managing Asthma: Does Inflammation Really Matter?"
**Speaker:** Michael J. Holtzman, M.D., Director of Pulmonary and Critical Care Medicine, Associate Professor of Medicine, Washington University School of Medicine, St. Louis

**Sponsored by the Missouri Thoracic Society**

# WOMEN PHYSICIANS

*Objectives: After attending this session, health care providers will have a greater understanding of the dynamics of domestic violence and the battering of women. This session will assist health care providers in the identification, diagnosis, treatment, medical record documentation and other interventions for victims of domestic violence.*

Saturday, April 9

9:00-12:00 noon **Scientific Program**

"Domestic Violence: A Health Care Crisis for Women"

**Speakers:** Coleen Kivlahan, M.D., Director, Missouri Department of Health, Jefferson City and Ms. Coleen Coble, Executive Director, Missouri Coalition Against Domestic Violence, Jefferson City

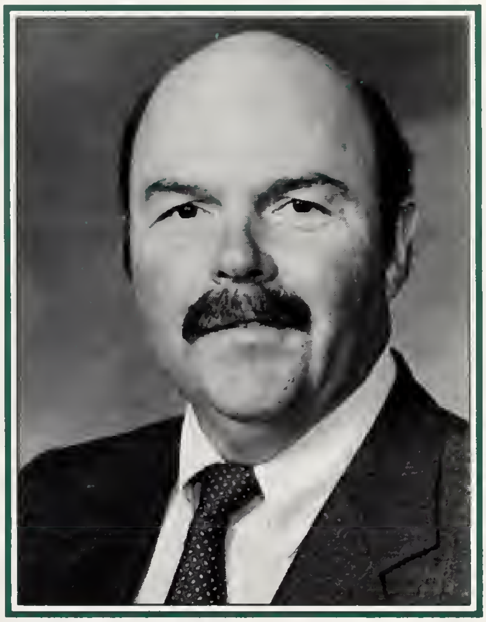
**Panelists:** Robert L. Muelleman, M.D., F.A.C.E.P., Truman Medical Center, Kansas City; James Kelly, M.D., Children's Mercy Hospital, Kansas City; Thomas Anderson, M.D., Missouri Psychiatric Association, Columbia; Jo-Ellyn M. Ryall, M.D., Psychiatrist, St. Louis; Ms. Deborah Furnell, Program Development Specialist, Department of Social Services, Division of Family Services, Jefferson City

**Sponsored by the American Medical Women's Association**
**Co-Sponsored by the Missouri Chapter, American College of Emergency Physicians**
**Missouri Chapter, American Academy of Pediatrics**
**Missouri Psychiatric Association**

## General Session Speaker

### William E. Jacott, M.D.

Vice Chairman, Board of Trustees
American Medical Association



WILLIAM E. JACOTT, M.D., a family physician at the University of Minnesota, and the Vice Chairman, Board of Trustees of the American Medical Association, will be one of MSMA's speakers for the 136th Annual Convention.

Dr. Jacott will address the Opening Session of the MSMA House of Delegates on April 7. During the General Session on April 8, he will discuss the status of the health care reform proposals. Dr. Jacott also will be participating in the April 8 session "Discuss the Issues with your AMA Delegates."

Dr. Jacott, who has served on the AMA Council on Medical Education, and on the Accreditation Council for Continuing Medical Education, received his medical degree from the University of Minnesota and is a member of the American Academy of Family Physicians.

# ANNUAL MEETINGS & EVENTS

Thursday, April 7

| | |
|---|---|
| 10:00-12:00 noon | **Opening Session, MSMA House of Delegates** |
| 12:00 noon | Metropolitan Medical Society of Greater Kansas City Luncheon |
| 12:00 noon | St. Louis Metropolitan Medical Society Luncheon |
| 12:00 noon | Councilor District 10 Luncheon |
| 6:00-7:00 p.m. | **Reception Honoring MSMA President Melvin Kasten, M.D. and MSMA Alliance President Mrs. Elizabeth Huffaker** |

Friday, April 8

| | |
|---|---|
| 7:00 a.m. | Councilor Breakfasts<br>Districts 1, 2, 4, 5, 6, 8 |
| 8:30-11:30 a.m. | MU Alumni Organization Board of Governors Breakfast Meeting |
| 9:00-10:30 a.m. | **MSMA General Session**<br>"Current Status of Health System Reform"<br>**Featured Speaker:** William E. Jacott, M.D., Vice Chairman, Board of Trustees, American Medical Association |
| 10:30-12:30 p.m. | Resident Physicians' Section Meeting |
| 10:30-12:30 p.m. | Young Physicians' Section Meeting |
| 11:00-12:30 p.m. | Discuss the Issues with your AMA Delegates |
| 12:00 noon | Councilor Districts 7 and 9 Luncheons |
| 12:00 noon | Student Delegates Luncheon |
| 12:30-2:30 p.m. | MU Alumni Awards Luncheon |
| 2:00 p.m. | St. Louis Metropolitan Medical Society Caucus |
| 2:00-4:00 p.m. | Hospital Medical Staff Section Meeting |
| 4:00-6:00 p.m. | **MSMA Second Session House of Delegates** |
| 6:00-7:30 p.m. | Receptions for UMC, UMKC, St. Louis University and Washington University |

Saturday, April 9

| | |
|---|---|
| 7:15 a.m. | MSMA Alliance Public Affairs Breakfast |
| 1:30 p.m. | MMPAC Meeting |
| 6:00 p.m. | **Presidential Inauguration** |
| 7:00 p.m. | **MSMA Reception** |

Sunday, April 10

| | |
|---|---|
| 7:30-10:00 a.m. | **MSMA Final Session, House of Delegates** |

# MSMA ALLIANCE EVENTS

## MSMA ALLIANCE PRESIDENT-ELECT
## MRS. JEAN WANKUM

THE MSMA ALLIANCE PRESIDENT for 1994-1995 will be Mrs. Jean Wankum, spouse of MSMA's Fifth District Councilor Robert Wankum, M.D.

Mrs. Wankum was elected president of the Cole County Medical Society Auxiliary in 1986. At the state level, she has served as Vice-President-Health Committee, Recording Secretary, Vice-President-Legislation Committee, AMPAC-MMPAC Chairwoman, and in 1993, President-Elect. In 1988, she represented the MSMA Alliance at the White House Conference for a Drug Free America. Mrs. Wankum was Auxilian of the Year in 1992.

Active on many boards and committees, Mrs. Wankum currently devotes time to the American Cancer Society and support groups in addition to her MSMA Alliance activities.

"We are in a time of change. The practice of medicine as we know it today will no longer exist tomorrow. Every physician and spouse must become involved to shape this change. Our voices united will have an effect!" said Mrs. Wankum.

The MSMA Alliance, established in 1924, has an active membership of 1,200 physicians' spouses.

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Thursday, April 7

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| 2:00-4:30 p.m. | Conjunct Board Meeting with 1993-94 Board and 1994-95 Board Leadership Training Seminar<br>**Speaker:** Mrs. Mary Hanson, AMA Alliance President |
| 6:00 p.m. | Reception honoring MSMA President, Melvin Kasten, M.D., and MSMA Alliance President, Mrs. Elizabeth Huffaker |
| 7:00 p.m. | "In the Spotlight" AMA-ERF Benefit Dinner featuring physicians and spouses performing for your pleasure |

Friday, April 8

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| 7:15 a.m. | MSMA Alliance Past Presidents' Breakfast |
| 8:30 a.m. | MSMA Alliance General Assembly |
| 12:30 p.m. | "Seize the Day" Luncheon with humorist commentator, Cynthia Smith |
| 2:00 p.m. | AMA-ERF Boutique, Tours of Kansas City, TBA |
| 7:30 p.m. | Dutch Treat Dinner featuring Sergei Shapoval's "Russian Kaleidoscope" |

Saturday, April 9

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| 7:15 a.m. | MSMA Alliance Public Affairs Breakfast |
| 9:00 a.m. | MSMA Alliance General Assembly |
| 12:15 p.m. | Installation Luncheon with AMA Alliance President, Mrs. Mary Hanson |
| 7:00 p.m. | Reception for MSMA President, H. Jerry Murrell, M.D., and MSMA Alliance President, Mrs. Jean Wankum |

# EXHIBITORS

Advanced Medical Data Systems
*Kansas City*

American Red Cross Regional Tissue Services
*Springfield*

Benchmark Computer Systems, Inc.
*Lenexa, Kansas*

Blue Cross Blue Shield of Kansas City
*Kansas City*

Blue Cross and Blue Shield
*St. Louis*

Correctional Medical Systems
*St. Louis*

Disability Determinations
*Jefferson City*

Encyclopaedia Britannica-North America
*Chicago, Illinois*

Forrest T. Jones & Company
*Kansas City*

GTE Data Services
*Jefferson City*

Health Midwest
*Kansas City*

Healthcare Interchange, Inc.
*St. Louis*

Kevin Sink Photography
*Shawnee Mission, Kansas*

Mayer, Hoffman, McCann
*Kansas City*

Medical Defense Associates
*Springfield*

The Medical Protective Company
*Fort Wayne, Indiana*

Medical Services Corporation
*Shawnee Mission, Kansas*

Medicare/Blue Cross Blue Shield of Kansas
*Topeka, Kansas*

Midwest Organ Bank, Inc.
*Westwood, Kansas*

MOMEDICO
*St. Louis*

Moneta Group
St. Louis

OfficeMate Systems, Inc.
*Bartlett, Illinois*

Office Tech, Inc.
*St. Louis*

The P.I.E. Mutual Insurance Co.
*Cleveland, Ohio*

Professional Healthcare Consultants
*Jefferson City*

Roche Biomedical Laboratories
*Kansas City*

SmithKline Beecham Pharmaceuticals
*Cordova, Tennessee*

SmithKline Beecham Clinical Laboratories
*St. Louis*

Syntex Labs
*Jefferson City*

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# PRE-REGISTRATION

## Missouri State Medical Association
## 136th Annual Convention

**April 7-10, 1994**
**Westin Crown Center**
**Kansas City, Missouri**

This year's Annual Convention offers a large variety of educational activities. To assist you in attending these programs, we ask that you complete and return this convenient self-addressed pre-registration form.

Upon receipt of your pre-registration form, we will send your confirmation card which you will need to present at the Convention registration desk. Your registration packet and name badge will be awaiting your arrival.

For more information about the MSMA's 136th Annual Convention, please call 314/636-5151.

(TEAR HERE)

**Name:** ______________________________
**(Please PRINT your name as you wish it to appear on your name badge)**

**Address:** ______________________________

**City/State/Zip:** ______________________________

**Name of County Medical Society**______________________
**Will you be serving as a delegate? Yes ____ No ____**
**Are you a member of: AMA ____ MMPAC ____**

**Please circle the Medical Specialty Programs you plan to attend.**

Allergy
Anesthesiology
Cancer
Dermatology
Emergency Physicians
Family Physicians
Heart Association
Internal Medicine
International Physicians
Neurology
Neurosurgery
Ophthalmology
Otolaryngology
Pathology
Pediatrics
Physical Medicine & Rehabilitation
Plastic & Reconstructive Surgery
Psychiatry
Radiology
Surgery
Thoracic
Women Physicians

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**Return to:**
**Missouri State Medical Association**
**113 Madison P.O. Box 1028**
**Jefferson City, MO 65102**

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